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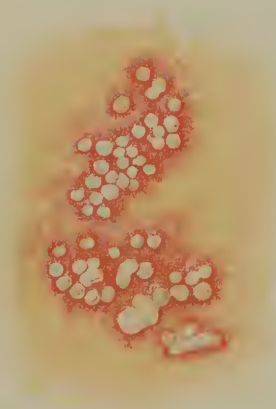




A. *Macule*



B. *Papule*



C. *Vesicles*



D. *Ulcer*

STAGES OF PRIMARY LESIONS OF THE SKIN

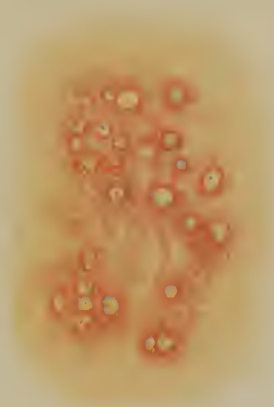


FIG. 1. (a)



FIG. 2. (b)

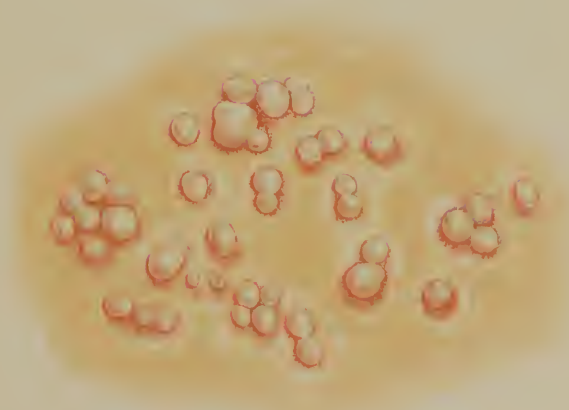


FIG. 3. (c)

FIGURE 3. PRIMARY LESIONS OF THE SKIN (a, b, c)

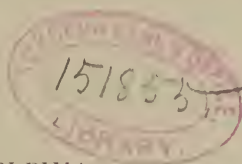
HANDBOOK
OF THE
DIAGNOSIS AND TREATMENT
OF
SKIN DISEASES

BY

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THIRD EDITION, ENLARGED AND REVISED.
WITH SIXTY ILLUSTRATIONS, SEVERAL OF WHICH ARE IN COLORS.



PHILADELPHIA:
P. BLAKISTON, SON & CO.,
1012 WALNUT STREET.

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TO
THE MEMORY OF
JOHN MARTIN VAN HARLINGEN,
THIS BOOK IS
AFFECTIONATELY DEDICATED,
BY HIS SON,
THE AUTHOR.

PREFACE TO THE THIRD EDITION.

In the present edition I have departed somewhat from the plan traced in the first edition of this book by adding numerous footnotes and references and by introducing articles upon some of the rarer affections of the skin.

My reason for doing so has been that I find the work not infrequently turned to as a book of reference, and am desirous that if it is to be so used it shall not be found disappointing.

My plan has been to give a brief account of the rarer diseases and then to add a footnote or reference to some source whence further information can be drawn.

A number of new illustrations have been introduced, some showing the appearance of rare affections, while others have been added with the view of displaying the same disease in several different forms or aspects. A chromolithograph illustrating the differential diagnosis of several of the common exanthemata has been introduced from Morrow's *Journal of Cutaneous and Venereal Diseases*.

All these additions have been made with the idea of aiding the practitioner in the diagnosis of such affections as he is likely to meet with at one time or another, and which are often very puzzling to one not versed in dermatology.

Most of the changes made in the text have been such as were called for by the recent additions to our knowledge in the department of bacteriology. The article on tuberculosis of the skin has been entirely re-written.

A considerable number of new methods of treatment

have been introduced as well as some new formulæ, while others have been dropped, as out of date.

In preparing this revision I have depended chiefly upon original sources and have avoided quoting from our standard text-books, as desiring rather to supplement than to duplicate these.

Exception has been made, however, in the case of the masterly treatise of Dr. L. Brocq, *Traitement des Maladies de la Peau*, second edition, Paris, 1892, from which, as not being accessible in the English language, I have felt at liberty to draw largely. I desire in this place to record my acknowledgment of indebtedness to its talented author.

I desire also to express my warmest thanks to the publishers for their liberality in providing extra illustrations and for their interest and assistance in improving the scientific character of the book.

117 South Eighteenth Street, Philadelphia.

September 1, 1895.

PREFACE TO THE FIRST EDITION.

In writing this book I have had in mind the wants of the practitioner, and I have tried to make it useful as a work of ready reference. For this reason I have given space to the description, diagnosis, and treatment of the various affections of the skin as met with in practice, touching lightly on questions of etiology, and omitting for the most part all reference to pathological anatomy. And this, not because I undervalue such knowledge, but because it does not come within the plan of a work not intended for students of dermatology. For the same reason, the commoner affections and those giving most distress and annoyance to the patient have been treated at full length, while the rarer diseases and those causing little trouble have been dealt with briefly. The alphabetical plan of arrangement has also been adopted, with the object of ready reference in view.

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DISEASES OF THE SKIN.

INTRODUCTION.

Symptomatology.—In order that we may get a clear idea of the diseases of the skin to be described further on in this work, it is first necessary to understand what is meant by the terms employed to designate the various lesions which go to make up the objective picture known as the *eruption*.

The lesions occurring upon the skin are of two sorts, *primary* and *secondary*.

Primary Lesions of the Skin.*—These are such elementary appearances as constitute the original manifestations of the affection. Thus, eczema may break out on the skin in the form of vesicles. The primary lesion in this case is a vesicle, while the scales or crusts forming during the evolution of the disease, though belonging to the same attack and perhaps beginning to show themselves within a few hours of the vesicles, are from their nature secondary.

The primary lesions of the skin are *macules*, *wheals*, *papules*, *tubercles*, *gummata*, *tumors*, *vesicles*, *bullæ*, and *pustules*.

Macules, or *spots*, are sometimes simple discolorations or pigmentary spots, as in chloasma, or they are vascular spots, as telangiectasis; sometimes they are accompanied by vascular congestion, as in the rashes of the exanthemata; sometimes they are petechiæ, or patches of extravasated blood, as in purpura.

* I am indebted to Dr. L. Brocq's excellent work, "*Traitement des Maladies de la Peau*," 2^{me} Ed., Paris, 1892, for some points referred to in this section.

Wheals are firm, flat, elongated, rounded or irregular, slightly raised elevations, which are pale red or bluish red, sometimes white with a red border, and are highly ephemeral, coming and going very quickly. They are the characteristic lesions of urticaria, or "hives."

Papules are small, firm elevations of the skin not containing any fluid, running a comparatively rapid course tending to resolution. Being made up of infiltrations of the upper layers of the skin, they disappear without leaving a cicatrix or any other trace of their existence. Papules vary from pin-head to split-pea size. They may be acuminate or pointed, as in keratosis pilaris, or flattened, with facet-like surfaces and polygonal contour, as in lichen planus; conical, as in the acne-form syphiloderm and in pityriasis rubra pilaris; hemispherical, as in some papular syphilodermata, or excoriated on the summit, as in prurigo and acute lichen simplex.

Tubercles are solid, morbid products, usually, but not invariably, elevated, circumscribed, rounded, slow in evolution, and not tending to spontaneous resolution, infiltrating the deeper layers of the skin so that they are frequently followed by cicatrices. (The tubercle is not merely a larger-sized papule, but it differs in infiltrating the derm more deeply and in its slower evolution. The papule is comparatively superficial and ephemeral. Tubercles may vary from pin-point to enormous size, as in syphilis and leprosy. (The term "papulo-tubercle" should not be used to indicate large papules. It is liable to give rise to confusion.) Tubercles are found in leprosy, syphilis, lupus, etc.

Gummata are more or less voluminous lesions seated in the deeper layers of the derm or hypoderm, firm, rising from the surface to a greater or less degree with a more or less rounded outline, and of a reddish color. They are of an inflammatory character, do not tend to resolution, but rather to central suppuration with the formation of a

deep ulcer. Gummata usually result in a cicatrix or sclerosis, but they may terminate in interstitial resorption.

Tubercles and gummata are much alike in many respects, but the tubercle involves the superficial as well as the deep layers of the skin, while the gumma begins beneath the superficial layers, leaving them, at first, unaffected. The gumma is usually larger than the tubercle. Gummata are found in scrofulo-tuberculosis and in syphilis.

Tumors are lesions of variable size, form, and consistence, tending to persist for a long time and to increase in size. They are distinguished from tubercles by their larger size, and from gummata by their different evolution. The division is artificial and only used for convenience of description. Tumors are found in keloid, sarcoma, carcinoma, molluscum, etc.

Vesicles are circumscribed, rounded elevations of the epidermis, varying in size from a pin-point to a split pea. They are usually rounded and hemispherical, but may take on various forms by coalescence, or in the course of their evolution. Vesicles contain serum, and are either crystalline and transparent, milky or hemorrhagic. Typical vesicles are found in eczema, herpes, dermatitis venenata, dysidrosis, etc. They may complicate many other skin manifestations.

Bullæ are really larger vesicles. They are composed of roundish or irregular elevations of the epidermis, varying in size from a large split pea to a goose-egg, containing at first a clear serous fluid which undergoes various changes in color with the evolution of the lesion. When several large bullæ unite, large areas of the skin are elevated as in extensive burns. The bulla may terminate by suppuration, by rupture, or by absorption, leaving a more or less thick crust, the separation of which after the lesion is healed is not infrequently followed by pigmentation. Bullæ are found in erythema multiforme, in dermatitis herpetiformis, in pemphigus, etc.

Pustules are circumscribed, rounded elevations of the epidermis containing pus. They are of two kinds, (*a*) superficial and (*b*) deep. The superficial pustule involves only the epidermis and the superficial strata of the derm. Its evolution is rapid and it leaves no cicatrix. The deep pustule involves the deeper strata of the derm, destroying the papillary layer at least, and is always followed by a scar.

The pustule is almost invariably surrounded by a red areola, which may be simply inflammatory or may be the nucleus of a more or less deep inflammation or new cell growth of the skin.

The pustule may terminate when superficial in rupture and the formation of a crust, followed by more or less pigmentation, or when deep in ulceration or gangrene, with loss of tissue and cicatrization.

Pustules are met with in variola, dermatitis herpetiformis, ecthyma, impetigo, acne, syphilis, etc.

Secondary Lesions of the Skin.—These are such as exist either as the result of primary lesions or from other causes. They are : *crusts, scales, excoriations, fissures, ulcers* and *scars*.

Crusts are effete masses of dried material composed of the products of disease of the skin.

Scales are dry laminated masses of epidermis which have separated from the tissues beneath.

Excoriations are losses of tissue occurring in the superficial layers of the skin.

Fissures are linear wounds having their seat in the epidermis or corium.

Ulcers are irregularly sized and shaped excavations of the cutaneous tissues, the result of disease.

Scars are new formations occupying the place of former normal tissue.

Classification of Diseases of the Skin.—The classifi-

cation of diseases of the skin now most generally employed by dermatologists, is that adopted some years ago by the American Dermatological Association. It includes the following eight classes :—

I. **Disorders of the Glands** ; (1) of the sweat glands ; (2) of the sebaceous glands.

II. **Inflammations.**

III. **Hemorrhages.**

IV. **Hypertrophies** ; (1) of pigment ; (2) of epidermal and papillary layers ; (3) of connective tissue.

V. **Atrophies** ; (1) of pigment ; (2) of hair ; (3) of nail ; (4) of cutis.

VI. **New Growths** ; (1) of connective tissue ; (2) of vessels ; (3) of granulation tissue.

VII. **Neuroses.**

VIII. **Parasitic Affections** ; (1) vegetable ; (2) animal.

DESCRIPTION OF THE VARIOUS DISEASES OF THE SKIN, IN ALPHABETICAL ORDER.

Achroma. (See *Albinism* and *Vitiligo*.)

Acne (*ăk-nē*).—The term *acne* is sometimes employed to designate all affections of the skin characterized by lesions of the sebaceous or pilo-sebaceous glands. This plan, however, is too comprehensive to be exact, because it does not discriminate between affections which are different in cause and which require different plans of treatment.

The affections of the sebaceous glands fall naturally into two classes.

A. Lesions of the gland and surrounding tissues.

B. Functional disorders.

A. Under the first head we have:—

- (a) *Inflammatory or simple acne* ("acne vulgaris"), which is the affection to which this name properly belongs.
- (b) *Acne artificialis, or medicamentosum*. (See *Dermatitis medicamentosa*).
- (c) *Acne rosacea*, which is composed of two elements; facial telangiectasis and inflammatory acne with seborrhea.
- (d) *Acne hypertrophica* or rhinophyma, which is chiefly a more severe degree of the previous affection.
- (e) *Acne atrophica* (acne varioliformis, acne pilaris, acne necrotica).
- (f) *Acne decalvans* (acne pilaris cicatricialis depilans). (See *Folliculitis*).
- (g) *Acne keloid, or keloidal sycosis* (dermatitis papillaris capillitii). (See *Sycosis*).
- (h) *Folliculitis sebaceum* or *sycosis*.

(i) *Acne syphilitica*. (See *Syphilis*.)

All these affections are closely connected, inasmuch as they are all forms of folliculitis sebaceum. They will, however, be described under their various headings.

B. The functional disorders of the sebaceous glands may be divided into two secondary categories.

(a) *Affections in which the secretion of the gland is not eliminated but collects in the gland or its duct.*

1. *Comedo*.

2. *Milium*.

3. *Sebaceous cyst*.

4. *Acne keratosa* (*acne corné* of the French).

(b) *Affections in which the glandular secretion is extruded upon the surface of the skin in the shape of scales or greasy crusts, or is poured out in the form of an oily fluid.**

The affections called *sebaceous acne* and *seborrhœa sicca* and *oleosa* belong under this category.

Acne Simplex (*āk-nē*).—Sometimes called *acne vulgaris*, is an inflammatory disease of the sebaceous glands characterized by the formation of papules or pustules, or a combination of these lesions, together with a certain degree of erythema, and occurring chiefly upon the face and over the shoulders, although it may occur upon any part of the surface where sebaceous glands exist.

It may occur alone or in connection with other affections of the sebaceous glands, as comedo and seborrhœa. The lesions are of various size, from a pin's head to a large split pea, and are commonly seen in both the papular and pustular, or the tubercular and pustular forms combined. There is usually no discomfort from the lesions excepting a feeling of soreness when touched. Their color is bright red to dusky violaceous.

* There is some question whether this oily fluid proceeds from the sebaceous glands or from the coil (sweat) glands. The latter certainly supply part of the product. (See *Seborrhœa*.)

The number of lesions varies in different cases from one or two to a very great number. The inflammation may be superficial or deep, even forming abscesses. The individual lesions may run their course in a few days, but the course of the disease as a whole is apt to be chronic, running on for years. If there has been much suppuration, more or less unsightly scars may remain.

Acne is one of the commonest diseases of the skin. In this country the statistics of the American Dermatological Association show its occurrence in the practice of specialists to be in the proportion of 9077 cases in 123,746, or 7.34 per cent.* among all diseases of the skin. I am inclined to think this an under-statement of the relative frequency of the disease. Many cases go untreated because patients have been assured by the family physician that the disease is incurable, or that it will get well of itself in time, or that it will not do to drive it in, etc.; refuges of ignorance which may satisfy the conscience of the physician, but which entail at times a great amount of shame and humiliation on young persons, particularly women, solicitous of their appearance. Acne occurs in the young of both sexes, appearing about the age of puberty. It does not often occur in children, and, on the other hand, only rarely makes its appearance for the first time in mature years.

The pustules of acne are pin-head to large pea-sized, rounded or acuminate, seated on a more or less infiltrated base of superficial or deep inflammatory product. Suppuration may be slight or abundant. When the base

*The statistics of the American Dermatological Association, comprising 123,746 cases carefully collated during the ten years from 1879 to 1889, first by Dr. James C. White, and later by Dr. James Nevins Hyde, form a most instructive storehouse of knowledge as to the comparative frequency of skin affections in this country. They far surpass in extent and interest any European statistics, besides being of more practical value as occurring in this country. I shall frequently have occasion to refer to them under the designation "American Statistics."

is deeply infiltrated the affection is known as *acne indurata*. In this last form the process sometimes runs on to the production of abscesses, which appear chiefly on the face and down the shoulders and back, forming a most serious and annoying phase of the disease. Indurated acne is apt to result in the formation of cicatrices, of a pitted or atrophic character, which are quite disfiguring. Sometimes keloid occurs as a result of indurated acne, the lumpy scars lasting some months, but finally, in most cases, disappearing spontaneously.

The causes predisposing to acne are numerous and varied in their nature. I know of scarcely any other disease of the skin in which the satisfactory result of treatment depends so much upon the recognition of the exciting cause. In its commoner forms it appears to be dependent to some extent upon the character of the skin. Persons with thick, oily skins are most apt to suffer from the diffuse form of acne, with numerous papular and pustular lesions mingled with comedones, while the sparse eruption of flat and papular lesions is often found in pale, anæmic individuals with dry, rather harsh skins. The most frequent predisposing cause of acne is puberty. The affection shows itself for the first time, in the vast majority of cases, at this period, and is apt to continue, unless remedial measures are adopted, until the system has assumed the equilibrium of adult life, or in woman until a later period. It is at the period of puberty that the sebaceous system takes on a new activity, the hairs begin to develop, and there is a sort of normal hyperæmia about the follicles, which may easily determine an abnormal condition resulting in the development of sebaceous disorders.

Other causes which may, either alone or combined, predispose to the occurrence of acne, are scrofula and cachexia ("acne cachecticorum") or general debility. Anæmia and chlorosis may also be mentioned in close connection

with these other causes, as favoring the development of acne, and in the more markedly pustular and indurated varieties a family history of tuberculosis is very often noted.

Of great importance in the causation of acne, and especially in favoring its continuance, is habitual derangement of the alimentary canal. Dyspepsia and constipation will be found present in the majority of cases, and often in such intimate relation to the disease that a fresh crop of lesions shall follow every attack of indigestion or of costiveness.

Disease of the nasal cavities may at times occur in connection with acne, but its causative influence has not been satisfactorily established.*

Uterine disorders, especially of a functional character, are often the indirect cause of acne; but at other times the remote cause of the affection seems beyond finding out, the patient remaining in an apparently perfect condition of general health. The immediate cause of acne is the invasion of the sebaceous follicle by the *staphylococcus pyogenes*. The skin is probably at all times subject to the invasion of this parasite, and under favoring conditions such as those above noted it readily germinates and develops its noxious inflammatory influence.

In a skin predisposed to the invasion of the staphylococcus, comedones very frequently act as an irritant, provoking its invasion. The effort to remove a comedo by pressure with a watch-key or otherwise, is often observed

* In the first edition of this work I made no allusion to masturbation as a cause of acne, because I thought no dermatologist of the present day could conceive of any connection between that habit and the eruption under consideration. I find, however, that the notion has again been brought forward, and that the passage of cold sounds has been employed to heal the acne thus supposed to have been caused. I wish to say that I believe the idea to have no basis, and I have nowhere seen any adequate testimony to support it. As to the passage of cold sounds through the urethræ of boys and young men suffering from acne, I hope that this cynical procedure will rarely be employed.

to excite inflammatory action, and this will suggest the manner in which the comedo can develop into the acne pustule.

The importance of this view of the etiology of acne, which is one of quite recent development, will be understood when the subject of local treatment is reached.

The diagnosis of well-developed acne presents few difficulties. We often meet with cases, however, where only a few imperfectly developed lesions are present, and where the affection may easily be mistaken for others of a widely different character. The age of the patient, the seat of the lesions, their chronic character and their inflammatory nature must be taken into account. The acneform eruption caused by tar may be recognized usually by the smell of that substance, and its presence in the follicles giving the appearance of numerous black points differing in appearance from comedones. In the eruption caused by bromine and iodine (see *Dermatitis*) the lesions are apt to be larger, of a brighter and more acutely inflammatory nature, and, when well-developed, the lesions tend to coalesce and to form elevated inflammatory areas covered with characteristic sebaceous crusts. Acne often closely resembles the papular and pustular syphilodermata, and great care must be taken to avoid mistakes in diagnosis. The history, the absence of syphilitic lesions on other parts of the body than those commonly affected by the eruption of acne, the uniform distribution of the lesions, those of syphilis tending to group, all serve to denote the presence of acne. When syphilis occurs on the forehead, or in one or two lesions on the nose alone, without any history whatever, as I have sometimes seen it, it is extremely apt to be taken for acne, and great caution must be exercised in coming to a decision as to the nature of the affection in a case seen for the first time. Severe cases of acne are sometimes taken for

variola, but this can hardly occur if a careful examination is made into the general symptoms and history of the eruption. Coccogenic sycosis also must be distinguished from acne.

DIFFERENTIAL DIAGNOSIS.*

BETWEEN

ACNE.

1. A disease of puberty and of early adult life.

2. Chronic, with exacerbations depending upon menstruation, attacks of dyspepsia, constipation, etc.

3. Often inflammatory in character.

4. No constitutional symptoms.

5. Eruption usually limited to face and shoulders, or occasionally breast.

6. Sebaceous glands markedly involved, comedones and milia numerous. The skin apt to be greasy.

7. The lesions are usually papules and pustules of uniform size.

THE PAPULO-PUSTULAR SYPHILO- DERM.

1. A disease of any age, but more usual in adults.

2. Acute or sub-acute as a usual thing, unless confined to one or two points.

3. No sign of acute inflammation excepting in rare cases.

4. Symptoms of constitutional syphilis; enlarged post-cervical glands, mucous patches about the tongue and mouth.

5. The eruption very often scattered over the body generally. Apt to be found on forehead, nose and neck, sometimes in scalp.

6. A tendency to scaliness, but commonly no involvement of sebaceous glands except when occurring upon nose.

7. The marked multiformity of syphilitic lesions is apt to be evident; large and small papules, ulcers, etc.

* This and many of the following schedules of Differential Diagnosis are founded upon those given in the excellent manual of "Differential Diagnosis of the Diseases of the Skin," by Conduct W. Cutler, M.S., M.D., New York, G. P. Putnam's Sons, 1887, to which I would refer those desiring a closer study of the subject. I have modified the text here and there in accordance with my personal experience.

ACNE.

8. The pustules are pointed and are covered with thick, smooth, epidermis. They show no crust until after having been opened. Are not usually grouped about the alæ nasi.

(For further points see the general diagnosis of syphilodermata.)

ACNE.

1. Disease of puberty and early adult life.

2. In its origin usually connected with the changes of puberty. May occur in either sex. Commonly connected with some disturbance of system.

3. Eruption appears on forehead, shoulders, etc.

4. A comedo usually at the center of the lesion. Hair follicles not affected.

5. Itching or burning absent or very slight.

6. No formation of crusts.

7. Eruption varies in extent, coming and going at different times.

THE PAPULO-PUSTULAR SYPHILO-
DERM.

8. The pustules often become spontaneously crusted, and this crust, if lifted off, shows a small ulcer with a "well" of pus. When only a few lesions are present these are apt to be found about the alæ nasi.

SYCOSIS, COCCOGENICA.

1. Disease of adult life.

2. Only occurs after full establishment of beard and only in males. May be due to contagion especially when occurring in connection with nasal catarrh; not usually connected in any way with general condition of health.

3. Eruption strictly confined to beard and moustache.

4. A hair invariably at the center of the lesion. The hair follicles the seat of the disease.

5. Itching and burning commonly present and often excessive.

6. Crusts frequently present.

7. Eruption stationary or steadily progressive. Fresh outbreaks usually occur after shaving.

The treatment of acne is of two sorts, constitutional and local. In order to treat a case of acne with any hope of success, we must first ascertain the causes which have operated in bringing it about. The foundation of the successful treatment of acne lies in the knowledge of its etiology. The patient should be carefully examined regarding every organ and every function. The habits of life, the

surroundings, the occupation of the patient, should all be known to the physician, who should also study the case well, to discover, if possible, what is the exact cause or group of causes of which the acne eruption is the expression and result. Without this, little can be hoped for, and acne is one of the minor opprobria of medicine, chiefly because the physician cannot or will not take the trouble to enter into the patient's case with the persevering thoroughness which is indispensable. It should be the aim of the physician to prevent the appearance of the lesions. External treatment, although in the light of recent advances in the etiology of the disease of much more importance than formerly, will rarely accomplish this, and internal measures must therefore be employed in almost every case. From what has been said under the head of etiology it will be perceived that in general the patient's health must be looked after and the system rendered more resistant to the invasion and spread of the disease. If anæmic, tonics are required, among which iron and arsenic are prominent; if the uterine functions are not regularly performed, these must be regulated; if dyspepsia exists, this must be combated by diet, regimen and the remedies appropriate to the condition. Constipation is a frequent concomitant with acne, and its removal is necessary to a cure. Acidity of the stomach, flatulence, a coated tongue, are ordinary symptoms, and these, together with irregular and perverted appetite, are constantly met with in connection with the affection under consideration. If constipation exist, saline or vegetable laxatives should be prescribed in sufficient quantity to open the bowels once or twice in the day. An occasional mercurial, as blue pill or a compound cathartic pill, may be prescribed in some cases. The following pill has proved useful in my hands:—

℞.	Pil. hydrarg.,	
	Ext. colocynth comp., āā	gr. iiss
	Pulv. ipecac,	gr. ss.
	Fiat in pil. No. j.	M.

Two or more of these pills are to be taken at bedtime, followed by a saline, as a wineglass of Hunjadi water in a goblet of plain hot water before breakfast the next morning. They are not, of course, to be taken habitually—perhaps once in five or ten days will be often enough.

The admirable mixture devised by the late Mr. Startin, of London, known as “*Mistura ferri acida*,” is one of the most valuable aperient tonics which can be given for acne accompanied by constipation.*

Crocker suggests the following:—

R.	Ext. cascara sagrada liq. (B. P.),	℥ _{x-xx}	
	Tinct. nucis vomicæ,	℥ _{vij-x}	
	Aq. menth pip., ad	℥ _j	M.

SIG.—Three times a day.

The natural mineral waters are used with good success in acne. The Hathorn and Geyser springs of Saratoga, the German Friedrichshall, Hunjadi Janos and Ofener Racoczy, all cathartic, are of use, the dose, of course, varying with the amount of constipation present.

There are many cases of acne, however, which depend upon some general derangement of the system, the scrofulous taint, anæmia, etc., and these must be treated quite differently. Cod-liver oil will in many cases be found a very efficient curative agent, particularly when the lesions are indurated and tend to extensive multiplication over the trunk as well as the face, with the formation of numerous abscesses. The compound syrup of the hypophosphites is likewise of benefit in these cases, as is also the extract of malt, which may be employed in some instances to replace cod-liver oil when this is found to disagree. The bitter and ferruginous tonics are occasionally called for in this class of cases, and the mineral acids are often of value.

The following formula will be found useful in indurated

* The formula for this mixture is given under Eczema.

acne with a tendency to the formation of abscesses, occurring in cachectic and scrofulous individuals:—

R. Quinæ sulphat., gr. viij
 Acid. sulphuric. dil., ℥ x
 Ferri sulphat., gr. xxxij
 Magnesii sulphat., ℥ iij
 Tinct. zingiberis, f ℥ ij
 Aquæ, ad. f ℥ viij. M.

SIG.—A tablespoonful in a tablespoonful of water, with a teaspoonful of cod-liver oil floating in it, morning and evening. (T. Calcott Fox.)

The following combination of iron with a mineral acid has sometimes proved of value when dyspeptic symptoms with anæmia coexist with the eruption of acne:—

R. Tinct. ferri chlor.,
 Acid. phosphoric. dil., . . . aa . . . f ℥ j
 Syrupi limonis, f ℥ ij. M.

SIG.—Teaspoonful in a wineglass of water thrice daily, after meals.

Among tonics arsenic stands first, sometimes appearing to act almost as a specific in anæmic cases. It may be given conveniently in the form of Fowler's solution, in two to four minim doses, gradually increased until the limit of tolerance is reached, and then dropped a little below this and continued for a considerable period. The following formula is a favorite with me; it combines the arsenic with iron:—

R. Liq. potassii arsenitis, f ℥ ij
 Vini ferri, ad f ℥ iv. M.

SIG.—Teaspoonful in water, after meals.

Fowler's solution should never be prescribed alone, to be given in drops. This is an inconvenient and not altogether safe method of administration. Patients cannot be trusted to drop out the medicine with the requisite care; the size of the drop may vary with different bottles; and it is always dangerous to allow a bottle of concentrated and poisonous medicine to go into the hands of unskilled and perhaps careless people. If it is desired to omit the iron, the Fowler's solution may be given in cinnamon water or

in plain water, as I often prescribe it. It should not be mixed with syrups, etc., as is sometimes recommended; patients are apt to revolt against the cloying sweetness, and it not unfrequently disagrees. I may say here that iron does not agree with some acne patients. As Dr. Fothergill says, iron does not agree with "bilious" people. Instead of arsenic, mercury may be given. Dr. R. W. Taylor prefers the following formula:—

R.	Hydrarg. bichloridi,	. . . . .	gr. j	
	Ammoniã muriat.,	. . . . .	gr. vj	
	Tinct. cinchonæ comp.,	. . . . .	f ʒ iij	
	Aquæ,	. . . . .	f ʒ j.	M.

SIG.—Teaspoonful in a wineglassful of water three times a day, an hour after meals.

The dose here is the thirty-second of a grain, which may be increased every ten days until in general the limit of toleration is reached. The effect of this treatment begins in about two or three weeks. Of course, it is not to be understood that syphilis is suspected in the cases in which mercury is recommended. It is simply as a tonic alterative. In cases when it may be desired to combine mercury and arsenic, Dr. Taylor recommends "De Valangin's solution," liquor arsenici chloridi, which can be given in connection with the bichloride of mercury. The dose of this solution is the same as that of Fowler's solution. The sulphur mineral waters, as those of Richfield, Sharon, Avon, and the White Sulphur of Virginia, etc., have a reputation for beneficial influence in acne. I am inclined to believe that there is something specific in the effects of the waters themselves, though much of the good effected is gained by the pure air and general tonic effect of the surroundings. Hygiene, in the form of fresh air, exercise, cold bathing, and a sojourn in the country or by the seashore, will now and then effect what medicines may fail to do. It should be added that the seashore life occasionally is found to disagree with acne patients, bringing

out the eruption in great abundance. Inquiry should be made before sending patients to the seashore, and they should be directed to change at once if the climate should prove unsuitable.

The local treatment of acne is of great importance, the more so in the present state of our knowledge regarding the important part played by the organisms which induce inflammation and suppuration, especially so with regard to the choice of remedies. There is perhaps no skin disease in which so many local applications have, at one time or another, been recommended. Used with discretion a few will suffice, but the great number of formulæ extant serve only to confuse the practitioner in search of an appropriate topical application. For this reason I shall give only a selection of those ordinarily used, and this shall embrace the preparations which I am accustomed to employ daily in my own practice, and which I can therefore vouch for from extensive personal knowledge of their good effect.

The external treatment of acne may be either soothing or stimulating. In a small number of cases there is much heat, redness, and acute inflammation present, and here mild washes and bland ointments, such as those to be given under the treatment of eczema of the face, will best answer.

When the case is a mild one and there is not too much irritation, a medicated soap* containing sulphur, salicylic acid, ichthyol, or a small percentage of bichloride of mercury, may be employed to cleanse the surface and remove some of the oily and epithelial debris, after which a saturated solution of boric acid in alcohol of 96° may be sopped

* The medicated soaps devised by Eichhoff are those which I find most convenient. They are well made, and although their therapeutic activity is not great, they form useful adjuncts to treatment.

on or applied on compresses to the lesions. The parasitidal effect of this remedy upon the purulent lesions is quite marked. Sometimes the more recent lesions may be aborted by means of this or similar applications.

Bathing the affected parts with hot water is usually of advantage and may be practiced twice daily, once when washing with medicated soap and once without. Immediately after the hot water applications the borated alcohol may be employed, or if a somewhat more active application is needed or can be borne, the following lotion may be employed:—

R. Hydrarg. bichlor., gr. vj-xij
 Alcoholis, f $\frac{3}{4}$ iss
 Aquæ destillat., ad f $\frac{3}{4}$ iv. M.

This may be diluted with water at first and gradually made stronger. The patient should be warned against its possible irritating effects, and also with regard to its influence upon metals, as rings, etc. It should not, of course, be employed with sulphur in any form.

Another formula often used is the following:—

R. Hydrarg. bichlor., gr. iv ad viij
 Tinct. benzoini, mxxx ad f $\frac{3}{4}$ j
 Emuls. ol. amygdalæ amaræ, ad f $\frac{3}{4}$ iv. M.

Hebra's "Oriental lotion," a popular remedy, is composed as follows:—

R. Hydrarg. bichlor., gr. viij
 Aquæ destillat., f $\frac{3}{4}$ iv
 Succī limonis, no. ij
 Albumin. ovi, no. vj
 Sacch. alb., $\frac{3}{4}$ j. M.

A combination of bichloride of mercury with sal ammoniac is often employed, as in the celebrated "Gowland's lotion," which is composed of 1 part each of chloride of ammonium and bichloride of mercury in 200 parts of emulsion of bitter almonds. The following is a convenient combination:—

R. Hydrarg. bichlor.,
 Ammonii chloridi, aa gr. iv
 Aquæ destillat., f $\frac{3}{4}$ iv. M.
 (*Brocq.*)

Sometimes sulphur preparations are serviceable, especially in more severe cases. One of the sulphur lotions most commonly employed is the following :—

R. Sulphuris præcipitat., ℥j
 Ætheris, f ℥vj
 Alcoholis, ad f ℥iv. M.

SIG.—Shake well before using.

Among the compounds of sulphur the following are frequently beneficial, particularly in sluggish cases of acne :—

R. Potass. sulphuret, ℥j
 Tinct. benzoini, f ℥j
 Glycerinæ, f ℥iss
 Aquæ rosæ, ad f ℥iv. M.

Another prescription which I have often used with benefit is the following :—

R. Potassii sulphuret.,
 Zinci sulphat., āā ℥ss
 Aquæ rosæ, ad f ℥iv. M.

The ingredients are each dissolved in one-half the water, forming clear solutions. They are then mixed, and a white precipitate falls, which is to be shaken up and applied to the face.

This should be used in a diluted form at first and gradually made stronger. It is not suitable when the skin is irritable.

When the skin is rather coarse and sluggish the face may be rubbed and washed every night with the soap known as “sapo viridis,” an imported soft soap, the use of which was introduced into this country from Germany. It is of the consistency of ointment, and contains a slight excess of caustic potash. The solution of this soap in one-half its weight of alcohol, known as “spiritus saponis kalinus,”* may be used instead of the soap itself, when a milder effect is desired. A small portion of soap or a few drops to half a teaspoonful of the spiritus saponis should be rubbed briskly over the affected skin for several minutes.

*The Tinctura Saponis Viridis, U. S. P., intended as a substitute for this, is not so efficient.

It must be remembered that these are strongly stimulant preparations, and their chief use is to cause absorption when the lesions are sluggish and indurated. They should be washed carefully off after use, and the part covered with powdered starch or a small quantity of cold cream or some other bland ointment. If they make the skin harsh, their use should be suspended or stopped. When the sebaceous gland ducts are unhealthy and plugged up, and when comedones abound, the soapy applications, especially if combined with copious bathing with hot water, loosen and aid in pressing out the plug of inspissated sebum, and in bringing the glands back to a more healthy condition. The watch-key or the comedo-extractor may also aid here in pressing out the comedones present, although these must be used with caution to prevent irritation. A still stronger application sometimes employed in these cases is a fifteen-grain solution of caustic potash in water. This may be followed by a stimulant ointment, as the following: *R.* Ung. hydrarg. precip. alb., ʒj; Ung. aquæ rosæ, ʒiij. The oxide or nitrate of mercury ointments may be substituted if a stronger effect is desired. Sulphur and its preparations are among the most valuable remedies in our possession for the treatment of acne in most of its forms. The following may be given as among the most eligible sulphur compounds with which I have had experience:—

R. Sulphuris præcipitat., ʒj
 Ung. aquæ rosæ,
 Petrolati, āā ʒiv. M.

Camphor may sometimes be added with advantage:—

R. Sulphuris præcipitat., ʒj
 Pulv. camphoræ, gr. xx
 Ung. aquæ rosæ,
 Petrolati, āā ʒiv. M.

Indurated and pustular acne may sometimes be benefited by the application to each lesion of solution of the acid

nitrate of mercury, on the end of a sharpened match, followed by bathing with hot water. Puncture with the point of a fine bistoury or with a lance especially designed for this purpose, is a good procedure in indurated acne with a tendency to the formation of abscesses.

It is a good plan to follow the puncture of the pustular lesions of acne by the application of some parasiticide. A sharp stick wet with a solution of bichloride of mercury (1-100) or with a drop of pure ichthyol will be found to discourage pus formation and to prevent recurrence of the pustule. The indolent indurated inflammatory masses which show no sign of suppuration may often be dispersed by the application of a 10 to 25 per cent. salicylic acid rubber plaster.*

Medicated soaps, particularly bichloride and ichthyol soap should be used to cleanse the surface after puncturing or scarification.

Unna highly recommends the employment of ichthyol, in the treatment of acne. He recommends to wash the parts thoroughly morning and evening with ichthyol soap (see *Soaps*), and then to rub in the following lotion :—

R. Ammoniz sulph. ichthyolat., gr. xij-3 ij
 Alcoholis (90°),
 Etheris, aa f3 iv. M.

It is usually well to begin with the milder strength of ichthyol and gradually increase it. The application can usually be allowed to remain on over night. If found irritating, it can be removed after half an hour and the parts covered with a slight application of the following ointment :—

R. Acid. boric., 3 ss
 Acid. salicylic., gr. x
 Ung. zinci oxid., 3j. M.

* As made by Johnson & Johnson, of New York.

Naphtol has been recommended in rebellious acne. Brocq uses the following:—

R.	Pulv. naphtol,	f3	
	Pulv. camphoræ,		
	Pulv. resorcin.,	āā	℥ij
	Sulphur præcipitat.,	3ij-3iij	℥j
	Saponis viridis,	3j	
	Cretæ præparat.,	℥j	
	Petrolati,	℥ij	℥iv. M.

This application which is perhaps too strong for most cases, should only be allowed to remain in contact with the skin for a quarter or half an hour, and should then be washed off and replaced by oxide of zinc ointment containing a small quantity of salicylic acid.

In mild cases Brocq employs a similar ointment containing eight grains each of naphtol camphor and resorcin, forty-five grains of sulphur, twelve grains of sapo viridis, and five drachms of vaseline. This may be allowed to remain in contact with the skin all night.

In extensive acne indurata with small abscesses, especially when the back is covered with numerous suppurating lesions, a system of disinfection of the surface should be employed.

The patient should remain in a warm bath until the skin is thoroughly softened, and then some disinfecting soap, as Fel's "germicide" soap, a bichloride soap of some kind or the compound soap of resorcin, salicylic acid, and sulphur (*Eichhoff*), is thoroughly rubbed into the surface.

The larger suppurating lesions should be opened with an acne lancet, the contents very gently expressed, and a small quantity of pure ichthyol should be introduced into the cavity on a small probe or sharpened stick.

Too much pressure should be avoided in emptying the contents of acne pustules, as it is possible to press the virulent matter into the surrounding tissues and thus create new foci of suppuration.

Some of the soapsuds may be left in contact with the skin, or an ointment containing ten to twenty grains of salicylic acid, a drachm of boric acid to the ounce of vaselin, may be gently applied. If there is any considerable amount of serous leaking, which may occur where many abscesses have been opened, a dusting powder composed of one part of boric acid to four each of oxide of zinc and starch may be dusted over the surface.

Other and severer remedies for acne have been recommended by authors, but I have had little experience with them, and believe that, in this country at least, the severer measures will usually prove too much for the skin, and will be more apt to prove injurious than beneficial.

Whatever plan of treatment is adopted, it is of the utmost importance that it be thoroughly carried out. The physician should, at first especially, see the patient every day or every few days, to ascertain if his directions are being properly followed. As Taylor remarks, much of the discredit which is attributed to physicians in the treatment of acne is due to two causes: first, either that they are not sufficiently careful, precise, and emphatic in giving the directions for treatment; or, secondly, that the patients only carry out their directions in an imperfect and indifferent manner. Always give the patient to understand that unless he does what the physician directs him to do, to the letter, the latter is not in any way responsible for his case.

The prognosis of acne should always be guarded. While by no means the desperate and incurable malady which it is sometimes said to be, by pessimistic or incapable practitioners, yet it often offers a stubborn resistance to treatment, and shows a marked tendency to relapse. The most extensively developed cases, moreover, are sometimes more amenable to treatment than those where half a dozen lesions alone represent the disease, and where the patient enjoys apparently good health. The question is, in the long run,

one of time only, as a spontaneous cure sooner or later almost invariably occurs. If neglected, however, unsightly and disfiguring scars supervene in severe cases, and our efforts, therefore, should be unremitting to obtain a speedy cure if possible.

Now and then keloid follows as a result of pustular acne. This condition, though unsightly and disfiguring, disappears spontaneously with the lapse of time, perhaps in three to twelve months. Treatment usually fails to hasten its disappearance, but see on this point under *Keloid*.

Acne Rosacea.—Acne rosacea is a chronic, hyperæmic or inflammatory disease of the face, more particularly the nose, characterized by redness, dilatation and enlargement of the blood-vessels, hypertrophy, and more or less acne. There are two classes of cases: 1. Those in which acne papules and pustules form the most prominent symptoms, while bright red congestion, with some infiltration of the skin, forms the background. 2. Those in which a sort of erythema or flushing is the first symptom, superadded to which occurs in chronic cases an enlarged and varicose condition of the superficial cutaneous veins, with occasionally hypertrophy of the nose.

The first variety is in reality more closely allied to simple acne. It occurs, however, usually in older persons, not often showing itself in women before twenty-five or thirty years of age and in men not until an even more advanced period. While the nose is the chief seat of this form of acne rosacea, it is likewise frequently encountered upon the cheeks and sometimes upon the forehead and chin. While the entire course of the disease may be chronic, it usually proceeds by acute exacerbations or attacks following some digestive, uterine, or other derangement. In the second variety, hyperæmia, or flushing, is the earliest symptom, intermittent at first and noticeable only after exposure to a close atmosphere or following the use of alcoholic

stimulants or a full meal. This hyperæmia is passive at first; the nose is cold to the touch and sometimes shows slight seborrhœa. Gradually the redness grows more marked and permanent. If now the nose is examined, small, tortuous blood-vessels can be seen ramifying in the skin of the affected part. The disease varies in intensity in different cases, from a slight blush to a marked deformity. The face and particularly the nose are the parts usually attacked. The course of this form of the disease is chronic, sometimes extending over years. The process usually goes no further than the formation of swollen and tortuous blood-vessels, with diffuse redness, but sometimes hypertrophy of the connective tissue takes place, with grotesque enlargement and deformity of the nose, which becomes knobby, irregular in shape, and may grow to enormous size. (See *Acne hypertrophica*.)

The causes of acne rosacea are various. It occurs both in men and women, but in the latter does not often tend to go beyond the first stages. In women also the disease is more prone to occur at two periods of life, at early womanhood and at the climacteric period. When occurring in young women, seborrhœa is apt to be present, and the disease appears to be due, in some measure certainly, to dyspepsia, anæmia, chlorosis, and menstrual difficulties. Sometimes the first variety occurs during pregnancy without any other sign of ill health and in persons who seem perfectly robust. It usually goes away under treatment, but may return in later life. When it occurs in later life it is apt to be more severe. In men the disease may occur at any period. In early life it is generally due to anæmia and debility, nervous prostration, and dyspepsia. In later life the use of spirituous liquors is often the cause, and, perhaps, nearly as often, dyspepsia in some of its forms. Habitual indulgence in alcoholic or malt liquors gives rise to this condition in various regions of the face.

The diagnosis of the second variety of acne rosacea presents no difficulties. In the first variety, however, where acneform lesions, pustules, sebaceous crusts, etc., predominate, the diagnosis is not always plain.

The tubercular syphiloderm of the nose and face, lupus vulgaris, lupus erythematosus and severe forms of eczema are most commonly confounded with acne rosacea. The distinctive symptoms are given below.

DIFFERENTIAL DIAGNOSIS.

BETWEEN

ACNE ROSACEA.

1. Disease lasting for years.
2. Sebaceous glands often involved.
3. Ulceration never takes place.
4. Crusting unusual. When present, sebaceous, or the result of drying pustules. The crusts, when detached, show no pus underneath.
5. The eruption is almost always symmetrical.
6. Pustules and tubercles apt to be small and indistinct.
7. Blood-vessels large and conspicuous.
8. Skin more uniformly affected.

ACNE ROSACEA.

1. Papules red, small, and not pronounced.
2. Both sides of nose and face usually affected.
3. No ulceration, no crusting, no cicatrices.
4. Disease spreads slowly or not at all.

THE TUBERCULAR SYPHILODERM.

1. Disease of months' duration.
2. Glands not involved.
3. Ulceration common.
4. Crusting not uncommon. Crusts, when detached, often show a "well" of pus beneath.
5. The eruption very often occurs on one side of the nose or face only.
6. Pustules and tubercles apt to be large and pronounced.
7. Blood-vessels not affected.
8. Patches of healthy skin between the lesions.

LUPUS VULGARIS.

1. Papules large, distinct, often yellow or yellowish red, semi-transparent, like apple jelly.
2. Affection unilateral.
3. Ulceration common, with crusting, usually cicatrices in patches of long standing.
4. Disease sometimes spreads rapidly, invading new localities.

ACNE ROSACEA.

5. Blood-vessels apt to be involved.
6. Acne pustules often present.
7. A disease of puberty and still more of advanced adult life.

ACNE ROSACEA.

1. Skin soft.
2. Not much scaling.
3. Blood-vessels enlarged.
4. Nose usually the seat of disease.
5. Presence of acne pustules.
6. Connective tissue in old cases apt to be hypertrophied.
7. Hypertrophy of sebaceous glands and in some cases large comedones.

8. Usually begins on and about the nose.

9. Progress uniform or with outbreaks of pustules.

ACNE ROSACEA.

1. Limited to face, especially about nose.
2. Lesions usually cold to the touch.
3. Slow in onset and course. May occur at any period. Due to internal rather than external causes.
4. Blood-vessels prominent and dilated. Epidermis smooth.
5. Eyelids not attacked.
6. Itching and burning absent, or very slight.

LUPUS VULGARIS.

5. No dilatation of blood-vessels.
6. Tubercles large and distinct.
7. Almost always begins in childhood.

LUPUS ERYTHEMATOSUS.

1. Skin harsh.
2. Lesions, if left undisturbed, are covered with yellowish sebaceous scales.
3. Blood-vessels not dilated.
4. Often appears on the cheeks first.
5. No papules or pustules.
6. No hypertrophy of connective tissue.
7. In some forms plugging of sebaceous ducts with inspissated masses of sebum. In others simply an erythema.
8. Often begins in isolated patches on cheek or elsewhere.
9. Apt to spread by erythematous outbreaks extending area of disease.

ERYTHEMATOUS ECZEMA.

1. Apt to occur upon the forehead, neck, etc., in addition to face.
2. Affected skin hot.
3. Apt to be sudden in onset. Much more common in winter and from external irritation.
4. Vessels not affected. Epidermis rough.
5. Eyelids usually attacked.
6. Burning and itching, one or both always present, sometimes intense.

ACNE ROSACEA.

ERYTHEMATOUS ECZEMA.

- | | |
|---|---|
| 7. Infiltration limited.

8. Presence of acne pustules,
etc. | 7. Infiltration generalized over
considerable areas.

8. Absence of tubercles and
pustules. |
|---|---|

The treatment of acne rosacea depends upon the stage of the disease and upon its cause in the given case. Constitutional and local remedies are both used. The causes giving rise to the affection should be diligently sought for and removed, when possible. Uterine and menstrual derangements are to be looked after, the stomach and bowels kept in good order, and all hygienic measures used to improve the general health. Alcoholic and malt liquors are to be totally eschewed. Tea and coffee should be drunk in moderation and not strong. Inveterate tea drinkers are very apt to have red noses. Tea is often made to take the place of food, and gradually brings on a sort of dyspepsia peculiar to itself. The food should be of the plainest character. The general medical treatment is that of acne. Local treatment, however, is of the most value. Sulphur ointments, as in acne, may be used in the early stages, the following formula being a useful one :—

R. Sulphuris præcipitat., $\frac{3}{4}$ i-ij
 Ung. aquæ rosæ, $\frac{3}{4}$ j. M.

Sometimes lotions are more useful.

The following lotion, known as *Lotio sulphuris cum tragacanthæ*, is one of the very best in the treatment of acne rosacea, as well as all forms of acne simplex in which the rosaceous element is prominent :—

LOTIO SULPHURIS CUM TRAGACANTHÆ.

("Kummerfeldt's Lotion.")

R. Sulphuris præcipitat., $\frac{3}{4}$ ij
 Pulv. camphoræ, gr. x
 Pulv. tragacanth., gr. xx
 Aquæ calcis,
 Aquæ rosæ, aa f $\frac{3}{4}$ ij. M.

This may be applied once to several times a day. In one of the most rapid cures of rosacea I ever observed, the patient kept putting on successive layers of the wash every few hours until her face was covered with a thin yellow crust. Sometimes the wash seems to "draw" the skin and gives rise to an uncomfortable sensation. In this case the sulphur ointment mentioned just above may be applied in small quantity after each application of the wash. On the whole, I have gotten more benefit for patients out of this wash than any other, and I count it the best application in acne rosacea. It will not always do good, however, and we are sometimes driven to try other plans of treatment. Ichthyol washes of various strengths are often useful in acne rosacea. A wash of corrosive sublimate, of the strength of one-fourth grain to two grains to the ounce of alcohol, or corrosive sublimate ointment somewhat stronger, sometimes answers well in the first stage of the disease. Neumann and Hebra recommended mercurial plaster spread on cloths. George H. Fox suggests the employment of chrysarobin, as in acne. Of course, this is to be watched, lest the irritative effect of chrysarobin be produced.

In the second variety of acne rosacea, where numerous well-defined blood-vessels can be seen coursing under the skin, the treatment must be somewhat different. Scarification in some form here offers the best chance of improving the condition of the skin. The dilated capillaries may be incised with a fine sharp knife, in the hope that adhesive inflammation may result with the effect of closing the vessels. The plan which I follow by preference, however, is that of cross-hatching the entire surface involved, not at one sitting, but in a series of operations. The larger vessels, if such are present, may first be slit up, and then with a multiple-blade knife, such as that figured under lupus erythematosus, held like a pen in the hand, a series of parallel cuts are to be made extending to about

one-sixteenth of an inch below the surface. These are then crossed by a similar series of cuts at right angles, and in some cases a third series of cuts may be practiced. As the object is not precisely the same as in the similar treatment of lupus, it is not necessary or desirable to hash up the skin by a number of successive incisions at various angles. To prevent cicatrices, it is indeed sometimes better to practice only a single series of parallel cuts at one sitting. It is usually desirable to benumb the surface before operating in this way, especially on timid or nervous persons, and this may be done by means of freezing. A small gauze bag filled with mingled ice and salt will produce the effect desired, but this may be accomplished more readily by the use of a hand-ball atomizer charged with rhigolene.*

The little operation completed, the parts may be bathed with cold water or tightly compressed with absorbent cotton until bleeding has ceased. Cold water compresses are to be applied subsequently, to control the bleeding. After this a bit of dry lint or some simple dressing may be applied for a few hours. So soon as the soreness has passed away, perhaps in a week's time, scarification may again be practiced. A number of scarifications are usually required, the treatment running over a number of months, and requiring patience on the part of both operator and patient. Eventually, however, a greater degree of success is attained by this method than by any other with which I am acquainted. The skin heals over without any scar, or with such minute cicatrices as are hardly worth notice, and a marked amelioration in the appearance of the nose is the result. Of course, there is a strong tendency to relapse.

* An exceedingly volatile hydrocarbon of the benzol series, boiling at a temperature of less than 80° F. On account of its extreme inflammability, it should not be employed in proximity to a fire or light. That which I use is obtained through Hance Brothers & White, Manufacturing Chemists, of Philadelphia.

The closure of some capillary channels naturally leads to the dilatation of those collateral, and thus new vessels appear as old ones are obliterated. Sooner or later, however, a marked impression is made, and a fair result may be hoped for, even in severe cases. What the tendency may be toward relapse after several years I cannot say, as I have only practiced the method for the past few years.

The sulphur and tragacanth wash may be employed concurrently with the surgical treatment described; it tends to keep down the preliminary erythema.

Another treatment is painting the affected parts once or twice weekly with a ten- to twenty-grain solution of caustic potassa and following this by an emollient poultice. In cases where there is but little thickening, carbolic acid dissolved in three to four parts of alcohol may be painted on the part every second day. Hardaway recommends electrolysis, using a number thirteen cambric needle inserted into any convenient handle, and connected with the negative pole of a galvanic battery. A sponge electrode is then connected with the positive pole. The needle is inserted sufficiently deep to enter the dilated vessel; so soon as this has been accomplished, the patient completes the circuit by taking the sponge electrode in his hand. So soon as the electrolytic action has been properly developed, the patient releases the sponge electrode, after which the operator withdraws the needle. Six to eight elements will generally suffice. If the vessel to be operated upon is a long one, several punctures must be made at suitable intervals of space. The needle may be inserted perpendicularly or in a line with the course of the vessel. In those rare and severe cases where knobby and gross deformity of the nose exists, decortication with the knife is the only remedy.

The prognosis of the first variety, at least in the early stages, is favorable, and there are few affections of the face

in which more striking and rapid results can be attained, up to a certain point, than in those cases of acne rosacea where there is a "red face" with numerous papular and pustular lesions, with little or no capillary dilatation. When, however, we have the second form to deal with, and especially when the disease has become thoroughly established, only thorough and long-continued treatment will avail. Where the capillary enlargement is already marked, treatment beyond a certain point is, in most cases, little more than palliative; it may prevent further progress, but this is much, and patients should be encouraged to persevere, especially in the treatment by scarification.

Acne atrophica. *Acne pilaris, acne varioliformis, lupoid acne* (*Bulkley*).—A form of acne running a very chronic course and accompanied by necrosis of the tissues, leaving a depressed cicatrix like that left by a pustule of smallpox.

The affection appears in the form of papular or nodular lesions, pin-head to pea-size, slightly elevated, of a dark red or violaceous tint, with a small yellowish, central, easily detached crust occupying a depression. This crust gradually increases in size and finally falls off, leaving a depressed cicatrix of one-eighth to one-fourth of an inch in diameter, red at first and gradually becoming white. The disease originates in a pilo-sebaceous perifolliculitis of the middle and upper portions, with a distinctive and necrotic tendency. In a case examined by Fordyce* numerous staphylococci were found at such an early stage of the disease as to indicate a microbiotic origin. Crocker† thinks that the little horny plug which appears at the orifice of the follicle acts as a source of irritation.

Acne atrophica usually occurs upon the temples and anterior border of the scalp, the alæ nasi, and between and upon the eyebrows. It may, however, occur in a diffused

* American Dermatological Association, October 7, 1893.

† *Ibid.*

form over various other portions of the body. The affection is one of middle age and is peculiarly inveterate. Brocq considers it allied to the *ulerythema acneformis* of Unna. It is to be carefully distinguished from certain forms of syphilis which it closely resembles. Tincture of iron and iodide of potassium internally, with antiseptics, and



FIG. 1.—ACNE ROSACEA. (*Seu Hypertrophica.*)

particularly mercurial ointments externally, form, according to Crocker, the best treatment.

Acne hypertrophica (*Rhinophyma*).—When acne rosacea of that form characterized by vascular dilatation takes on an extreme development, a new variety of the disease occasionally presents itself. The excretory orifices of the sebaceous glands become greatly dilated, the glands themselves

become hypertrophied until they may become tenfold their normal size, while the tissues around take on an elephantiasic appearance.

The affected parts are of a dusky red, violaceous appearance, irregular and mammillated in outline, with very numerous and greatly enlarged glandular orifices. The most grotesque deformity may result, the nose may become as large as the fist and may hang down over the upper lip, or even to the chin. Such cases are of course extremely rare. The neighboring regions of the cheeks and the forehead are often involved at the same time, but to a much less marked degree.

Two anatomical varieties of acne hypertrophica have been described by Vidal and Leloir: a *glandular* form, where the surface is bosselated and where hypertrophy of the pilo-sebaceous glands is chiefly present, and an *elephantiasic* form, which is that usually called "rhinophyma," where the surface is smooth and which is characterized by chronic œdema of the skin with vascular dilatations, and sclerosis of the derma.

The only satisfactory treatment for this affection is decortication.

Acne-keloid (*Dermatitis papillaris capillitii*; *Sycosis keloidien of the Nucha, etc.*)—This affection, which partakes of the nature of sycosis, acne, and keloid, at once, is usually found upon the back of the neck just below the hairy scalp. The initial lesion is a follicular and perifollicular inflammation simulating ordinary acne. It is accompanied, however, from the beginning by a deep infiltration of the derma, which can be perceived by pinching the skin between the fingers.

The hair follicles involved are usually completely destroyed; some, however, persist and often appear in the form of a bunch of two, three, or more hairs springing from a common opening in the center or edge of a keloidal

tubercle, and resembling a sort of brush. These hairs are thick and twisted, being evidently altered from their normal condition. Around each pustule of acne a keloidal growth forms, constituting in time a nodulated hard tumor over the entire area implicated. The nodules vary in shape and elevation, but are mostly somewhat conical and about the size of a large indurated acne tubercle. In the white races the color of the lesions is a bright red or rose color, sometimes showing fine branching capillaries like those observed in keloid.* About the border of the affected region small acneform pustules or rather folliculitis pustules are seen, which are traversed by hairs.

The lesions have a tendency to group and form by confluence large indurated masses, which resemble and, in fact, are usually considered keloidal tumors. The seat of the affection is almost invariably upon the back of the neck, just below the edge of the scalp, where it occupies a broad transverse band about where the collar rubs. It may occur, however, elsewhere. Acne pustules are usually found at the same time scattered about, especially in the region of the moustache and beard.

Lebou has shown that acne keloid is a perifolliculitis of the hair follicles in which the embryonal tissue surrounding the follicles, instead of tending to suppuration, goes on to the formation of sclerous tissue.

Acne keloid is extremely rebellious to treatment, and the prognosis, when the disease is fully developed, is unfavorable. All sources of irritation should be avoided; a large soft collar should be worn, or, better, no collar. In the early stages of the disease the acneform pustules should be destroyed as soon as they form. They should be opened and tincture of iodine or solutions of bichloride

* All the cases of this affection which I have seen have occurred in the colored race, where, of course, none of these tints can be observed.

of mercury or ichthyol should be applied to the cavity. External treatment over the whole surface, including the surrounding skin, should be continuously employed. Salicylic acid rubber plaster on the lesions, with frequent and thorough applications of bichloride soap or *sapo viridis*, should be followed by applications of a parasitocidal character, as ichthyol, a saturated solution of boric acid in alcohol, etc. Occasional poulticing with starch poultices sprinkled with boric acid will aid the treatment.

The thermo-cautery may also be used with good effect.

The knife, which is very frequently called into play in the removal of the tumors, is not effective unless immediately followed by cauterization. There is no doubt that the affection is infectious and due to the invasion of some parasite not yet described. It spreads by auto-inoculation, which is favored by the use of the knife in operation.*

Acrochordon (*ak-ro-kor'-don*).—The name given to minute, sometimes thread-like or flask-shaped growths resembling warts, but probably minute fibromata. (See *Fibroma molluscum*.) They are commonly found about the neck and trunk, and have no especial pathological significance. The larger lesions feel like a small empty raisin rolling under the finger. When unsightly or annoying from their position, they may be removed by clipping off with a pair of small curved scissors, the base being cauterized with a drop of nitric acid.

Acrodynia (*ak-ro-din'-i-a*).—The name given to a peculiar epidemic affection characterized by pain and a feeling of weight in the limbs, particularly the lower extremities, digestive disturbances, erythematous patches, sometimes

* See J. N. Hyde, "Dermatitis papillaris capilitii"; H. W. Stelwagon, *ibid.*, *Journal Cutaneous and Venereal Diseases*, June, 1893, p. 223; Van Harlingen, Morton and Griffiths, "Transactions College of Physicians," Philadelphia, 1895-6.

papules, phlyctenulæ, followed by desquamation and more rarely pigmentation of the epidermis. The symptoms are said to resemble those of chronic arsenical poisoning.

The existence of the affection has been questioned.*

Actinomycosis.—Actinomycosis of the skin is a rare disease in the human race. It is commonly met with upon the face and is characterized by the appearance under the skin of livid red tumors, which gradually push up to the surface and become riddled with fistulous openings, exuding a sanious or purulent fluid containing yellow granules from the size of a pin-head to that of a hemp-seed size.

In the neighborhood of the original lesion secondary lesions and subcutaneous chains of lesions form, which likewise open and give exit to pus.

The disease is caused by the presence of the ray fungus, or *actinomyces*, which usually penetrates the tissues by the mouth, especially about carious teeth, and develops outward toward the surface. The characteristic yellow granules are composed of a mass of finely interwoven threads, radiating from a center and club-shaped at the extremities, and giving a mulberry-like appearance. The threads compose the mycelium of the fungus, while the club-shaped extremities are probably the spores.

Actinomycosis of the skin may be mistaken for scrofuloderma, lupus, syphilis, or sarcoma. The absence of glandular enlargement and the peculiar tendency to spread by the formation of new lesions in groups or lines, the cribriform arrangement of the fistulous openings, and the appearance of the yellow granules mentioned above are all characteristic.

The treatment consists in laying open the sinuses, scraping, and thorough disinfection.

* See Barthelemy, P., "De l'empoisonnement chronique par l'arsenic les rapports avec les epidemiques d'acrodynie." Thèse de Montpellier, 1889.

Gautier has recently obtained an excellent result in one case of this affection, by the application of the electro-chemic method. This process depends upon the decomposition by the electric current of a ten per cent. solution of iodide of potassium into nascent iodine and potassium. Two platinum needles are implanted in the tumor and a current of fifty milliamperes is passed through its substance. Meanwhile, a few drops of the iodide solution is injected by means of a hypodermic syringe, at intervals of a minute or two. The patient should be etherized, the operation being painful. About twenty minutes should be taken for each operation, which may be repeated at intervals of about a week.

Actinomycosis is supposed with considerable probability to be the cause of madura foot. (See *Fungus Foot*.)

Addison's Keloid.—(See *Morphea*.)

Adenoma sebaceum.—The sebaceous glands are not unfrequently the seat of various morbid changes (see *Comedo*, *Milium*, *Molluscum sebaceum*), among which may be here mentioned two rather rare forms of adenoma. The first is the "adenoma sebaceum" of Balzer and Menebrier, characterized by the appearance of pin-head to pea-sized non-congenital, indolent tumors, roundish or slightly acuminate, firm, and of the same color as the surrounding skin. They sometimes show small, white milium-like points. These are found chiefly on the forehead, about the nose and ear.

The second form is congenital, and has been called by Darier "Nævus vascularis verrucosum." Originally vascular nævi, they suddenly develop to a certain extent about the period of puberty, then become stationary and occasionally disappear. They are more frequent in women and occur about the alæ nasi, the mouth, and on the chin. They appear as small yellowish-white, reddish, or reddish-brown firm tumors, from pin-head to cherry-stone size, and are

covered with a network of fine blood-vessels. These tumors are sometimes discrete, and at other times confluent. They usually coexist with acne, comedo, and other affections of the sebaceous glands.

The treatment of these tumors is destruction by means of caustics, the sharp spoon, or by electrolysis.

Adenoma of the Sweat Glands.—Under this title an affection has been described occurring about the lips, nose, and adjacent parts of the face, as well as the forehead and scalp. The lesions are composed of groups of pale, colorless papules, which when pricked give exit to a small quantity of clear fluid. Under the microscope the sebaceous glands are found unaffected, while the glomerulæ of the sweat glands are enormously enlarged.

Ainhum (*īne-hum'*) is a disease peculiar to the African race, who first gave it this name, which signifies "to saw," and is characterized by a slow, progressive, fatty degeneration, generally with increase in volume of the toes, especially the smallest, resulting from a linear strangulation. The affection begins by a not quite semicircular furrow in the digito-plantar fold, occupying the internal and inferior portion of the root of the small toe, without any marked inflammation, pain or ulceration which may attract the attention of the individual affected. Gradually the furrow becomes deeper, and sometimes slightly ulcerated, and extends itself to the upper (dorsal) and external surface of the toe, thus forming, at last, a circular groove; while the anterior part of the toe—that is, that which is in front of the groove—becomes swollen to twice or three times its natural size and loses its shape, becoming oval or almost globular. The epidermis becomes rough; the nail is said not to become particularly changed, but it is turned outward by the rotation of the toe on its axis, which always takes place when the pedicle by which the toe remains attached to the foot becomes very thin, and

the anterior part of the toe interferes with progression. Spontaneous amputation sometimes takes place. The affected parts preserve their normal sensibility.

The progress of the affection is very slow, the time elapsing between the formation of the original furrow and the more or less perfect completion of the spontaneous amputation having been, in some instances, ten years or more. When the little toe of one foot has been affected some time, that of the other foot becomes usually likewise diseased. After both the small toes are removed, neither any other toe, nor any of the fingers, nor any other part of the body becomes affected. (In rare cases the little fingers have been found affected.)

Brazil, the West Indies, and the West Coast of Africa are the commonest localities of the disease, but within the last few years cases have been reported from the southern United States. Recent pathological investigations, particularly those of Wile, point to the intentional and persistent application of a ligature by the patient as the cause. The only treatment, after strangulation has been effected, is the early removal of the useless and cumbersome member.

Albinism.—The condition which has been termed albinism, consists in a congenital absence of the normal pigment. It may be partial or general. In the latter case the subjects are known as albinos. Here the skin is of a milky-white or pinkish color, the hair white, yellowish-white or red, and even the iris and choroid of the eye are more or less deprived of pigment. It is said that in the negro the eyes are not affected, and cases are on record where the color of the affected patches has returned. This affection is to be carefully distinguished from *vittiligo* (*q. v.*).

Alopecia (*al-op'ē'-shā-a*).—Alopecia is a condition of more or less complete baldness, resulting from a deficient growth

of the hair. It may be considered under the heads of *congenital*, *senile*, *idiopathic premature*, and *symptomatic premature*.*

Congenital alopecia is the name given to those rare forms of the disease where an individual is born without hair. In one such case microscopic examination showed absence of hair bulbs. I am acquainted with the case of an otherwise healthy infant, upon whose scalp only lanugo (fine downy hairs) grew until after the third year of life. A hereditary predisposition to scanty growth, or early loss of hair, may often be traced.†

Senile alopecia, or the baldness of old age, is connected with the general atrophy of the cutaneous tissues which occurs at this period of life. The hairs become gray, thin and dry, and are cast off, not to be renewed. The hairs of the body generally become thinner, and drop out to a less extent, at the same time.

Idiopathic premature alopecia, or premature baldness, may take place either rapidly, in the course of weeks or months, or, as is most generally the case, slowly, through a period of years. The hair may begin to come out at any period after puberty, although it does not generally fall much before the age of twenty-five to thirty. The scalp is healthy to all appearance, no pityriasis being present. At first only a few hairs fall, and these are succeeded by new ones growing from the same follicles, but coming earlier to maturity and falling out before they have attained a normal length. The process is progressive, more and more hairs falling prematurely. Each new crop of hairs is shorter and finer than the preceding, until finally only lanugo or short, fine, soft, woolly hairs are produced. In the course of time even these are no longer produced; the hair follicles

* Alopecia areata is considered under a separate head.

† This is not the same as hereditary alopecia areata, to be mentioned later.

become atrophied, and complete baldness ensues. The process is sometimes arrested and normal hairs may be produced for a time, but the improvement is apt to be transitory.

This form of alopecia is very common; it is more frequent among men than among women; as in senile alopecia, it ordinarily begins about the vertex and extends toward the forehead.

Symptomatic premature alopecia includes those forms of more or less complete baldness, caused by local or general diseases. The loss of hair may be temporary or permanent. Fevers, nervous disorders, violent shocks to the nervous system and mental distress, worry or overwork, may give rise to sudden or gradual loss of hair. In a case coming under my own care an attack of cystitis seemed to have been the exciting cause. Local affections, particularly those attacking the follicles, as seborrhœic eczema, pityriasis, and lupus erythematosus, may give rise to baldness, generalized or in patches, which may be permanent. When baldness results from erysipelas, psoriasis, eczema or variola, the hair is apt to return again after the disease has passed away and with the recovery of the general health. Syphilis and leprosy also occasion alopecia. In syphilis loss of hair occurs in the first general outbreak, just as in other fevers; the hair is then usually reproduced. Later in the history of the disease it may occur in consequence of local lesions, and when these are ulcerative the hair does not grow again. Such cases are rare, and the notion that has prevailed in some quarters, that premature baldness is the result of syphilis, is absurd, except in the limited sense that debauchery may reduce the tone of the general system, and thus give occasion to falling of the hair.*

* For the most recent description of alopecia see Fournier; Sajous, *Annual of the Universal Medical Sciences*, vol. iv, 1892, p. 2. Also Crocker, *ibid.*, p. 7.

The remedies to be used in alopecia must depend upon the exciting cause and the circumstances of the disease. The first two forms described are, of course, not amenable to treatment. Idiopathic premature baldness, when there is a hereditary tendency to an early fall of the hair, is almost hopeless as regards any effect to be produced by medication. When there is no history of early baldness in the family, the disease, when taken in hand early, can often be arrested in its progress. Local stimulation is the plan of treatment to be followed. Weekly, semi-weekly, or even daily shampooing may be practiced with the soap wash known as “spiritus saponis kalinus” :—

R.	Saponis viridis,	3 iv	
	Alcoholis,	f 3 ij.	M.

Dissolve with heat, and filter.

This tends to keep the scalp free from the natural accumulation of sebum and epidermic scales, and likewise stimulates the scalp. After shampooing, the scalp is to be thoroughly cleansed with clear water, dried as thoroughly as possible, and the following oil is to be applied :—

R.	Acidi carbolici,	gr. xv	
	Glycerinæ,	f 3 ij	
	Aquæ cologniensis,	ad . . . f 3 j.	M.

A good method of applying this oil, so as to get the full benefit of it upon the scalp, is to divide the hair in long “parts,” by means of a comb, and then, with the aid of a Barnes’ dropper, such as is used for dropping solutions into the eye, let a drop or so of the oil be placed here and there upon the scalp, in the line of the part, at intervals of an inch, and well rubbed in with a soft brush like a tooth brush. Having gone over the scalp in one line thus, let new parts be made, parallel with the first, and the same procedure gone through with. Thus each portion of the scalp is in turn reached by the oil, which is thoroughly rubbed into it, a comparatively small portion getting into

the hair to make a mess, as such applications certainly will do if rubbed in at random.

After a time the shampooing with the soap spirit may be dispensed with, or only employed at long intervals, as, in the case of women, especially, this is a very troublesome business.

The inunction with the oil should, however, be persevered in until the hair has ceased to fall, or until the case must be given up as hopeless. The majority of cases, however, will do well under this treatment, if carefully carried out. I think that local treatment alone can be relied upon in this form of alopecia, but, of course, each case must be judged by its total aspect, and the patient's general health cannot be left out of account.

Sometimes a hard soap may be used for shampooing. Eichhoff's salicylic acid, resorcin, sulphur and tar soap is a good one to use. Rohé, in cases where there is much scalliness, washes the scalp with a tar soap and then rubs in the following :—

R.	Pulv. resorcin.,	5 ^{ss-j}	
	Sp. myrciæ,	f 3 ^{iiij}	M.

A small quantity of glycerine, say half an ounce, may be added to this formula if the scalp is dry.

Lassar recommends that the scalp should be washed with tar soap and then a two per cent. solution of corrosive sublimate in alcohol, should be well rubbed in. This should be followed by the application of a one to three per cent. alcoholic solution of naphtol, to dry the hair, and the scalp should finally be anointed with a two per cent. solution of salicylic acid in olive oil.

There is no question but that many cases of alopecia do better under antiparasitic treatment than under the use of merely stimulating applications. Blaschko, Tison, Barthé-

lemy, and others* have obtained the best results by the use of such treatment.

If a single application alone is to be used, as in the milder cases of alopecia following fevers, etc., the following will be found convenient:—

R.	Sodii biborat.,	gr. xxiv	
	Acid. salicylic.,	gr. viij	
	Tinct. cantharidis,	f℥ ij	
	Spir. myrciæ,		
	Aquæ rosæ, aa	f℥ j	
	Aquæ bullientis, ad	f℥ iv.	M.

The treatment of that form of alopecia which is in the stricter sense symptomatic, such, for instance, as is found in nursing women, in students preparing for examination, and after exhausting illness or mental troubles, is in general the same as that above given, only that here the patient's general condition is more obviously at the bottom of the alopecia, and attention must first be given to obviating or neutralizing the cause. Iron, quinine, arsenic, occasionally cod-liver oil, and, above all, nux vomica and strychnia, are the remedies upon which we chiefly depend. In addition, moreover, to the local remedies above given, cold-water douches, frictions, frequent brushing, and the application of one of the stimulating washes to be mentioned under alopecia areata, will be found useful. Massage has been employed with marked success by Dr. Emma W. Brooke, of this city, both in this form of alopecia and also in certain cases of the other varieties.

The prognosis in premature idiopathic baldness must always be guarded. If we can stop the fall of the hair and prevent matters getting any worse, that is about all that can be expected. To restore what has been already lost is usually more than we can succeed in accomplishing.

* Sajous, *Annual of the Universal Medical Sciences*, v. iv, 1893, p. 4, et seq.

In baldness following fevers, etc., on the other hand, much can be hoped for as the result of early and vigorous treatment faithfully carried out. Syphilitic alopecia, of course, demands specific treatment, local means not being neglected. The following ointment is useful when distinct syphilitic lesions exist in the scalp:—

R.	Hydrarg. bichlor.,	gr. ss	
	Tinct. cantharidis,	f ʒj	
	Medullæ bovis,	ʒ ss	
	Ol. rosæ,	q. s.	M.

Or, when a fluid preparation is more adapted to the purpose, the following may be used:—

R.	Hydrarg. bichlor.,	gr. ss	
	Tinct. cantharidis,	f ʒij	
	Ol. ricini,	ʒ ss	
	Alcoholis,	ad f ʒj.	M.

Alopecia areata. (See also *Perifolliculitis decalvans*).—

Alopecia areata is an atrophic disease of the hair system, characterized by the usually sudden appearance of one or more circumscribed, whitish bald patches, varying in size and shape, or of more or less universal baldness. Alopecia areata may attack any portion of the hairy surface, but the scalp is by far the commonest seat of the disease. In rare instances the entire hair system is involved, and the patient may not only lose the hair from the scalp, but that of the eyebrows and lashes, the beard, the axilla and pubis, and the fine hairs over the general surface of the skin. A number of such cases have come under my observation. Upon the scalp the disease is usually observed to consist of one or several patches of baldness, roundish, sharply circumscribed and conspicuous. They may vary in size from a small coin to the palm of the hand. The baldness is generally complete, the area presenting a whitish, perfectly smooth, polished surface, often without a trace of hair. There is often a ring of short or broken-off hairs around the margin of the patch. Less frequently a thin

growth of hair persists over the nearly bald areas. The skin is slightly or not at all altered, excepting that the hair follicles gradually atrophy.

The course of the disease is variable ; in some instances the hair thins out slowly ; in other cases a handful of hair may come out in a single night, leaving a fully developed patch. The ultimate size of the area is soon reached, and it usually grows no larger. When several patches exist they usually form one after another, and one may be recovering while another is forming. The disease may continue weeks, or oftener months, or even a year or two ; its course is very variable. Relapses are not uncommon. A growth of lanugo, or fine, downy hairs, often occurs in the course of the disease, leading to the false hope that the hair is at length about to return ; but the soft, fine hairs drop again, leaving the patch as bald as before. When, however, complete repair once sets in, recovery is occasionally rapid. The new hair is sometimes at first pale, gray or mixed in color, subsequently assuming the normal or even a darker shade. There are no subjective symptoms, as a general thing, but patients now and then suffer from neuralgia, or notice a premonitory itching, heat, or soreness.

The causes which produce the disease are not understood. Some cases are undoubtedly parasitic in character, and all cases occurring in children must now be considered as suspicious with regard to the possibility of contagion. We should warn patients, particularly children, against exchanging caps and otherwise coming into close contact with those suffering from this affection.* I have in several instances, since the publication of the second edition of this work, observed a form of *tinea tonsurans* accompanying or preceding alopecia areata in children, and numerous foreign

* See Crocker. Sajous, *Annual of the Universal Medical Sciences*, v, iv, 1892, p. 10, and Hutchinson, *ibid.*, p. 11.

observations of the same character have been made of late years. This matter is of importance, and should be considered in giving certificates to school children who may have suffered from this affection.* The majority of cases of alopecia are, in all likelihood, due to some functional nerve disturbance, which itself, according to A. R. Robinson's researches, may be caused by a parasite about the hair papillæ, causing impaired nutrition. It has been noted to follow neuralgias, sudden nervous shocks, and debility resulting from various causes. In many cases, however, patients enjoy excellent health, and no appreciable cause for the attack can be assigned. Occasionally alopecia areata appears to be hereditary. Some years ago I saw a mother and daughter, respectively thirty and fifty years of age, both of whom showed complete absence of hair from the scalp, pubis, and axillæ, of some years, standing.



FIG. 2.—ALOPECIA AREATA FOLLOWING WOUND OF NERVE.

Crocker† reports cases of alopecia areata extending through three generations.

The affection is not very uncommon, the American statistics showing its occurrence in 794 of the 123,746 cases reported, *i. e.*, in .641 per cent.

Alopecia areata is more apt to be mistaken for trichophyton tonsurans than for anything else.‡ The suddenness of the

* See a very interesting account of an epidemic of alopecia areata, occurring in Boston, by Dr. John T. Bowen, *British Journal of Dermatology*, March, 1894, p. 80.

† *British Journal of Dermatology*, vol. v, June, 1893, p. 176.

‡ There is a form of syphilitic alopecia where the hair falls entirely from a segment of the eyebrow. This, which is pathognomonic of syphilis, is sometimes the only sign of that disease present, and may be confounded with alopecia areata. The occurrence in this locality alone is, however, suspicious of syphilis.



FIG. 3.—April 29, 1886.*



FIG. 4.—July 20, 1886.



FIG. 5.—October 12, 1886.



FIG. 6.—December 16, 1886.

* These series of plates (Figs. 3 to 8) show the course of a typical case of alopecia areata from beginning to end.

attack, however, the more or less complete baldness, the absence of desquamation, the whiteness and remarkable smoothness of the patch, always enable it to be distinguished from *trichophyton tonsurans*. Difficulty can only arise in old cases of *trichophyton*, where the short, characteristic hairs have disappeared; but even here more or less desquamation exists, with a grayish "goose-flesh"-like surface, very different from the ivory-like appearance of the scalp in alo-



FIG. 7.—February 18, 1887.



FIG. 8.—April 18, 1887.

pecia areata. *Trichophyton tonsurans* begins as a small patch and spreads slowly; there are always, or almost invariably, a certain number of nibbled-looking, broken-off hairs in the patch, and there is a history of contagion. The microscope revealing the characteristic fungus (see under *trichophyton tonsurans*) will settle the matter, and should always be employed in cases of doubt.

But as has been remarked above, the two affections may

occur simultaneously, or nearly so, in the same individual, a point to be taken into consideration.

The treatment of alopecia areata should be both internal and external. The ordinary tonics—iron, quinine, arsenic and nux vomica, or strychnia—are ordinarily to be employed. In some cases, phosphorus and cod-liver oil may be given with advantage. Often the patient's general health appears to be perfect, and only after long and careful search can the weak point be found to which the failure in nutritive power is to be attributed. Occasionally the minutest examination will fail to yield any evidence of disturbance of the normal equilibrium of the system. Treatment must then be purely empirical. Hygiene is always of importance.

The external applications which have been found useful, or which have been thought to be of use, in alopecia areata, have all been directed with a view to one single object, namely, to stimulate the skin and to cause a more active flow of blood to the affected parts. Alcohol, cantharides, the essential oils, glycerine, castor oil, carbolic acid, tar, iodine, turpentine, ammonia, salts of mercury, veratria, acetic acid, tannic acid, nux vomica, pepper, quinine, sulphur, kerosene oil, and crude petroleum, are among the remedies usually recommended as most valuable. These substances may be applied either in the form of ointments or of lotions, in sufficient strength to produce a stimulant or rubefacient effect, once or twice daily, as occasion may require. Before making any of these applications it will be well to have the scalp or other affected part washed well with castile soap and water, or, better, with the spiritus saponis kalinus. (See *Alopecia*.) After washing, the scalp is to be dried with a coarse towel, and brushed with a thick-set but not too stiff brush, until moderately stimulated.

One of the hard medicated soaps may also be employed. In view of the possible presence of a parasite a bichloride soap perhaps would be preferable.

Patients sometimes express the fear that a vigorous application of the external remedy may itself produce baldness to a greater degree, but it will be found that after the patches have fairly formed the remaining hairs are firmly seated. Among the formulæ published in such numbers in books and medical journals, those following will be found most efficient in the majority of cases:—

R.	Tinct. cantharidis,					
	Tinct. capsici,	aa	. . . . .	f $\frac{3}{4}$	ss	
	Olei ricini,			$\frac{3}{4}$	ss	
	Aquæ cologniensis,			f $\frac{3}{4}$	j.	M.

Sir Erasmus Wilson used to recommend the following :—

R.	Olei amygdalæ dulcis,					
	Liquoris ammoniæ fort.,	aa	. . . . .	f $\frac{3}{4}$	ss	
	Olei limonis,			f $\frac{3}{4}$	ss	
	Spiritus rosmarini,	ad	. . . . .	f $\frac{3}{4}$	iv.	M.

Wilson also recommended frictions with a liniment of aconite, etc. :—

R.	Tinct. aconiti rad.,			f $\frac{3}{4}$	iv	
	Chloroformi,			f $\frac{3}{4}$	ij	
	Liquor ammoniæ,			f $\frac{3}{4}$	j	
	Pulv. camphoræ,			$\frac{3}{4}$	j	
	Olei olivæ,	ad	. . . . .	f $\frac{3}{4}$	ij.	M.

Oil of turpentine, brushed or rubbed into the patches with a stiff brush, once or twice a day, until the scalp becomes sensitive, is recommended by some writers. The late Tilbury Fox recommended the following, which I have used with satisfaction :—

R.	Tinct. nucis vomicæ,			f $\frac{3}{4}$	ss	
	Tinct. cantharidis,			f $\frac{3}{4}$	vj	
	Glycerinæ,			f $\frac{3}{4}$	ij	
	Aquæ destillatæ,			f $\frac{3}{4}$	iss	
	Aquæ rosæ,			f $\frac{3}{4}$	ijj.	M.

I have sometimes blistered the bald patches with cantharidal collodion with success. Crocker, while blistering recent patches, directs the loose hairs about the patches to be pulled out and the following ointment rubbed in :—

R.	Chrysarobin,			$\frac{3}{4}$	ss-j	
	Lanolin,			$\frac{3}{4}$	j	
	Olei olivæ,			q.	s.	M.

Some caution should be employed in the use of this remedy on account of its tendency to produce inflammation.

Another prescription recommended by Crocker as well as others, is the following:—

R.	Hydrarg. bichlor.,	gr. ij-v	
	Alcoholis,	f 3 j	
	Olei terebinthinæ,	f 3 vij.	M.

Bulkley recommends a 95 per cent. solution of carbolic acid brushed lightly over the affected surface with a swab and then rubbed in.

All of these forms of treatment prove useful at one time or another, but unfortunately, any or all may at times prove unsuccessful. One should be tried after another with great perseverance.

Electricity also is used in some cases with advantage, four to ten cells of the constant current battery being used, and the negative pole placed in contact with the diseased patch. The treatment of alopecia of the beard is essentially the same as that of alopecia of the scalp.

The prognosis of alopecia should be guarded. Sometimes recovery takes place in a few months, in other cases it may be delayed for years. Now and then the hair is not restored at all. As a rule, in young persons, the baldness is not permanent. Treatment should be persevered in.

Alopecia syphilitica.—Loss of hair occurring in the course of syphilis may result from early or late lesions of the scalp. The early form of syphilitic alopecia usually occurs in the first months of the disease, and is unaccompanied by any lesions perceptible to the naked eye. Its most characteristic feature is its generally disseminate character. The hair is thinned on various irregular areas over all parts of the scalp, and the loss is not usually confined to any one locality. In rare cases, however, alopecia areata may occur in similar disseminate patches of thinning,

so that this characteristic of syphilitic alopecia is not absolutely diagnostic.

The hairs in syphilitic alopecia are dry and dead looking, and seem to be attenuated. The hair bulbs are atrophied. They fall rapidly, sometimes "by the handful," as patients express it. However, every degree of baldness may be observed at one time or another in different cases. In rare cases generalized alopecia over the whole body is observed. A very conspicuous symptom of syphilitic alopecia is the complete denudation of the external part of the eyebrow on one or both sides. This is not, as is sometimes asserted, pathognomonic. It may occur in alopecia areata, and also in keratosis pilaris. (See *Keratosis pilaris*.)

The prognosis of alopecia syphilitica is almost always favorable. In some cases, when the patient has a hereditary tendency to premature baldness, where the health is much impaired, or at a more or less advanced age, a complete restitution does not take place; but in general a tolerably speedy return to the normal condition may be predicted.

The best treatment of this form of alopecia is that demanded by the syphilitic disease, and the earlier this is undertaken, when once the diagnosis of syphilis has been arrived at, the less likely is alopecia to occur, and the more trifling in any case is the fall of hair likely to be.

Lotions of bichloride of mercury, 1 to 1000 or 1 to 500, are called for in the early stages of the alopecia, and these may be followed by the following pomade when the case will admit:—

R.	Quinæ sulphat.,		
	Turbith. mineral.,	. . . āā	gr. viij
	Medullæ bovis,	. . . . .	ʒj.
			M.
			(<i>Mauriac</i> .)

These applications may be alternated every few days with the following:—

R.	Sodii carbonat.,		
	Sodii biborat.,	. . . . . āā	gr. xx
	Aquæ destillat.,	. . . . . f	ʒ x.
			M.

Fournier has the hair cut short ; washed well with sapo viridis and hot water every morning, and the scalp well rubbed with the following pomade :—

R.	Acid. salicylic.,	gr. xv	
	Sulphuris præcipitat.,	ʒ ss	
	Lanolin,		
	Vaseline, āā	ʒ iv.	M.

In the evening the scalp is brushed with the following :—

R.	Acid. salicylic.,	gr. xv	
	Tinct. cantharidis,	f ʒ ss	
	Tinct. rosmarin., ad	f ʒ iv.	M.

Angiokeratoma (*an-jī-o-kēr-a-to'-ma*), called also *Telangiectasis verrucosum* and *Lymphangiectasis of the hands and feet* (*T. C. Fox*).—A rare skin affection characterized by the appearance of numerous small telangiectases and pedunculated tumors of nævoid appearance, varying from large pin-head to hazelnut size, with occasional nævoid patches of one-sixth inch to an inch or more in diameter, slightly raised above the surface (*Zeisler*). The affection is usually seated upon the hands and feet, but may involve the limbs and occasionally other localities. The hands are most apt to be attacked. In *Zeisler's* case there were numerous nævoid warts upon the palmar surface of the fingers and springing from beneath the nails. In the same case patches of vitiligo were observed on the thorax and other parts which were free from the angiokeratoma.

According to *Zeisler* the warts consist of an outward layer of thickened epidermis surrounding a highly vascular center. *Pringle*, however, considers the tumors to be essentially telangiectasic. They sometimes occur after chilblains. The treatment is destruction by electrolysis or similar means.*

Compression may be exerted directly by bandages, plaster, etc., when the growth is in a favorable position.

* *Piffault, Thèse de Paris, 1893. Zeisler, American Dermatological Association, October 7, 1893.*

This plan, however, can rarely be carried out and is often unsatisfactory.

Anatomical Tubercle.—(See *Tuberculosis cutis*).

Angioma (*an-jě-o'-ma*).—Angioma is a new growth of the skin consisting wholly or in part of new formed blood- or lymph-vessels.

Blood vascular growths occur in three forms, *nævus vasculosus*, *telangiectasis*, and *angioma cavernosum*.

Nævus vasculosus includes those vascular anomalies of the skin which are either visible at birth or very soon after. It occurs in the form of one, or sometimes several, spots, from the size of a small pin-head to that of the palm of the hand, or larger tracts. While these are usually level with the skin, the smaller ones are occasionally found raised like small red tumors. The color of the lesions varies greatly. Usually it is a bright red, but at times it has a deep port-wine tint. In some cases the color is like a stain or an erythematous blush. At other times tortuous blood-vessels may be seen coursing over the surface. Pressure by the finger causes a momentary pallor. The epidermis over the lesions remains unchanged. On superficial inspection the lesions seem sharply defined, but on closer examination the edge of the vascular area is seen to fade gradually into the surrounding skin.

Nævus vasculosus has little tendency to grow when once developed. Hyde says that occasionally, especially in the case of infants but a few days old, phagedæna or gangrene will suddenly occur in these patches without appreciable cause (probably in consequence of the occurrence of thrombus), and the entire growth will slough away, leaving a scar exactly delineating the area of the former *nævus*.

As regards the cause of *nævus*, the explanation given by Virchow, namely, superfluous vascular formations in

those portions of the embryo at which junction of the various parts takes place, seems most plausible. A small quantity of matter left over, squeezed out between the joints as it were, like superfluous building material, forms these nævi and the similar growths of lymphatics, hair, pigment, etc.

Nævus vasculosus simplex is most frequently met with about the head, and next to this upon the trunk, and then the extremities. Among 333 cases observed by Weinlechner, 243 were found upon the head. Of these 200 were in the face, of which 54 were frontal, 35 palpebral, 32 nasal, 30 labial, and 26 buccal. Of 20 cases of nævus of the face which I have seen, 12 were in females and 8 were in males. As regards position, 14 were on the right side, 4 on the left side, and 2 appeared to be symmetrical.

The treatment of vascular nævus, aside from the radical surgical measure of bodily removal by the knife or ligature, has one principle underlying it, namely, that of obliterating the blood-vessels by pressure, inducing coagulation, or by exciting enough inflammatory action in the growth to obliterate the caliber of the vessels composing it. This may be accomplished in any one of a number of ways. Minute nævi no larger than the head of a pin may be destroyed by puncture with a red-hot needle, or with a needle charged with nitric or glacial acetic acid, or by electrolysis, with the aid of one or more needles connected with the positive pole of a four- to ten-cell combination of a constant current battery. (See *Electricity in the Treatment of Skin Diseases*.) When the growth is a little larger, from the size of a split pea to that of a ten-cent piece, it may be treated by caustic applications. Of these, sodium ethylate is one of the most efficient. It rarely causes severe pain, and may be applied on the end of a glass rod. Other caustics are nitric acid and glacial acetic acid, which are available in the larger as in the smaller-sized nævi.

Solution of caustic potassa is also occasionally used, although this is a remedy of dubious value, since, to get it strong enough for a proper effect on the tissues, we must make it so powerful as to run the risk of too rapid action and consequent hemorrhage. Injections of tincture of the chloride of iron, with tincture of cantharides, carbolic acid, and the like, into the substance of the growth, have been recommended, but these methods are not without danger, when the growth has not been first isolated, and fatal cases of embolism have been reported as following the use of the iron solution. Vaccination has long been practiced in suitable cases. The virus must be pricked in with needles at a suitable number of contiguous points simultaneously. Linear scarification, as used in telangiectasis and rosacea, may occasionally be employed, but this, as well as punctiform scarification, when used with uncharged points, will usually be found unsuccessful. The galvano-cautery and Paquelin's cautery have also been used.

The prognosis of *nævus vascularis* is usually favorable. The growth gives rise to little or no sensation, rarely increases in size, except sometimes at the second dentition, and sometimes decreases or disappears spontaneously, especially at puberty. Occasionally, however, the smaller and prominent growths undergo malignant change, and this, as well as their unsightly appearance, should be considered by the physician who may be called upon for an opinion as to the advisability of treatment.

Telangiectases are new growths consisting of blood-vessels, and in this respect are similar to *nævi*. They differ from the latter, however, in being acquired, and not congenital. They are commonly first observed in adult life and occasionally multiply with advancing years. They occur in localized and in diffuse forms. The diffuse form is excessively rare. I have observed one case.

The localized forms of telangiectasis are characterized by the occurrence of minute, flat or slightly elevated, pin-head to pea-sized maculæ; diffuse patches; linear ramifications of individual vessels or contorted congeries of a plexus of the latter, usually pinkish or violaceous in color. The lesions are non-inflammatory and painless, and occur single or in small numbers, chiefly upon the face, but also upon the neck, back of the hands, etc. They may occur in the neighborhood of various skin diseases, particularly in leprosy, keloid, lupus, scleroderma, etc., cicatrices, and sometimes upon the surface of tumors. In keratosis pilaris, angioma pigmentosum et atrophicum, rosacea, etc., they form the chief element. The treatment is the same as that of nævus vasculosus.

Telangiectasis verucosum will be found described under Angiokeratoma.

Angioma cavernosum consists of a dense framework of new-formed connective tissue enclosing loculi or chambers of varying capacity, containing blood, and not only communicating with each other, but with the larger vessels in the vicinity. They are said to be rarely congenital, but are acquired soon after birth. Sometimes they originate from a nevus or superficial telangiectasis. Often when fully formed they are distinctly encapsulated. The baggy purplish masses or tumors, filled with contorted, vein-like channels, sometimes met with on the faces of adults, are cavernous angiomata. They belong rather to the field of the surgeon than to that of the dermatologist.

Angioma pigmentosum et atrophicum.—A rare affection, called also by various other names, as “xeroderma pigmentosum,” “liodermia essentialis cum melanosi et telangiectasia,” “melanosis lenticularis progressiva,” “atro-phoderma pigmentosum,” etc.

The disease usually begins in childhood, by the formation of “freckles,” chiefly involving those parts of the skin

usually uncovered. Interspersed among the pigment spots are small white atrophic spots and cicatricial areas, and also some small stellate vascular patches, the whole forming the picture described in the title which was given the disease by R. W. Taylor, to whom we owe much of our knowledge of this rare affection.

In addition to the angiomata, pigmentary and atrophic spots, most cases present also warty, fungating or lobular excrescences. These in time take on malignant action. The eyes may be the seat of new growths and vegetations.

The affection usually begins in early life, in its first or second year. Most of the cases, though not all, have terminated fatally after the lapse of years. Treatment has thus far proved unavailing.

Angioneurosis.—(See *Gangrene, Trophoncuroses, Neurotic skin diseases*, etc.)

Anidrosis (*au-idro'-sis*).—Anidrosis is a functional disorder of the sweat-glands, consisting in a diminished and insufficient secretion of sweat. It sometimes occurs in connection with ichthyosis. (See *Ichthyosis*.) In rare cases an individual ceases to sweat entirely at times. In these cases the health is greatly impaired, and much suffering may ensue, especially in warm weather. The disease in this form is very rare. In the treatment every effort should be made to increase the activity of the skin. Hot or cold baths, steam baths, and frictions may be employed. Pilocarpine would seem to be indicated, but I do not know if this remedy has been employed as yet. Of course, the general health should be looked after.

Aniline Dyes, skin disease produced by.—(See *Dermatitis*.)

Anthrax.—(See *Malignant Pustule* and *Carbuncle*.)

Aphthæ.—Superficial ulcers occurring usually upon the mucous membranes of the mouth and vulva.

Aphthous stomatitis is characterized by the occurrence of

minute red patches upon the buccal mucous membrane, which are rapidly transformed into vesicles and then by maceration into shallow ulcers. They may vary from one or two to great numbers. The affection usually presents itself only in the ulcerative stage. The ulcers are roundish, pin-head or larger, covered with a whitish, yellowish, or grayish exudation and surrounded by a slightly elevated rim with a red areola. The ulcer becomes flatter and more superficial after a day or two, and then the surface usually clears off and healing takes place.

The usual seat of the lesions of aphthous stomatitis is upon the internal surface of the lips and cheeks, the neighborhood of the frænum linguæ and the edges and tip of the tongue. The affection is of more severity in children than in adults, and in the former may prevent nursing, and occasionally is accompanied by diarrhœa and fever. Fatal results have occurred in rare cases.

While the duration of the individual lesions is only a few days the affection may be prolonged by successive outbreaks.

The exact cause of the occurrence of aphthæ is not always to be ascertained. In the majority of cases it appears to be connected with some disorder of the digestive tract. Occasionally it has appeared possible that the affection has been transmitted from some of the domestic animals, either directly or indirectly, as from milk, etc.

The diagnosis of aphthæ is usually not difficult. From herpes the eruption is distinguished by its localization, its lack of the peculiar grouping of the herpetic lesions and by the greater size and depth of the lesions.

Aphthæ are distinguished from *dental ulcers* by the peculiar form and locality of the latter. These are confined to the gum near the edge of the teeth, or to some part of the tongue or buccal mucous membrane, which has evidently

been irritated by the sharp edge of a broken tooth, and they show much more inflammatory reaction.

The lesions of *ulcero-membranous stomatitis* resemble aphthæ to a certain degree, but are much more serious looking and are accompanied by marked constitutional disturbance.

The treatment of aphthæ requires attention to the patient's general condition, a careful attention to diet and local cleanliness. The physician is rarely consulted for aphthæ excepting in the case of infants. If artificial feeding is practiced, the milk, etc., should be sterilized. Mild laxatives, as magnesia, rhubarb, or castor oil, may be employed at the outset of the treatment.

The local treatment is perhaps the most important. The mouth should be cleansed at short intervals by means of a soft rag dipped in a solution of borax. If the aphthæ are rebellious, they may be lightly touched with a little powdered alum, a solution of chromic acid one grain to the drachm of water, or in older children with the mitigated stick of nitrate of silver.

Aphthous Vulvitis of Children.—Aphthous vulvitis is almost entirely confined to children. It may occur in the course of some systemic affection, as roseola, and occasionally is said to appear as an epidemic.

The affection begins by the appearance of two or three to twelve or fifteen small vesicles, whitish or yellowish-gray in color, discrete or confluent, not involving the surrounding tissues. At the end of thirty-six to forty-eight hours the vesicles coalesce into larger patches, sometimes of one-third of an inch to an inch in diameter, and at the same time break down into shallow ulcers. The surrounding tissues are inflamed, red, and tumefied. Pruritus is a marked symptom of this stage. There are no general symptoms up to this time excepting occasionally slight fever.

If the little patient is carefully taken care of, reparation

ensues from this stage, but the cure may be delayed by successive outbreaks.

In some cases, however, the disease may go on to gangrene.

There is usually more or less catarrhal inflammation of the vulva, and not unfrequently vaginitis has preceded the aphthous outbreak. Occasionally aphthous stomatitis and aphthous vulvitis occur simultaneously in the same subject, and the anus is not infrequently involved. The disease may extend to the neighboring portions of the integument.

The eruptions of *variola*, *varicella*, etc., may be confounded with aphthous vulvitis, but the concomitant symptoms will readily distinguish them.

Diphtheritic vulvitis rarely occurs without involvement of other parts, notably the pharynx, etc. The white patches of false membrane, the involvement of the glands, and the general systemic disturbance occurring in diphtheria, will serve to distinguish this from aphthous vulvitis.

Chancres or *chancroids* are so different in all their concomitants, of infiltration, glandular enlargement, etc., that it is scarcely possible to confound these affections with the one under consideration. On the other hand, the *secondary papule-erosive syphiloderm* resembles aphthæ very closely. However, these syphilitic lesions are less markedly ulcerative in character, and are almost invariably accompanied by characteristic general symptoms of one kind or another.

I think that *vulvar herpes* is the affection most apt to be mistaken for aphthæ, and sometimes the two affections can only be differentiated with difficulty. Vulvar herpes, however, rarely occurs in more than one or two groups, is usually unilateral, and is apt to recur about the menstrual period.

The ulcerations occurring as a result of attempted rape are usually accompanied by other symptoms of violence, abrasions, etc.

The treatment of aphthous vulvitis comprises, first, absolute cleanliness, and the treatment of any vaginal discharge which may have caused, or may keep up, a condition of irritation; and, second, the application of parasiticide local remedies. Of these, iodoform is the best. If this cannot be used, aristol or eucrophen may be dusted on the lesions.

The patient's general condition, of course, must be taken into account, and any hygienic or tonic treatment which may seem indicated should be added to the local treatment.

Area Celti.—(See *Alopecia areata*.)

Argyria.—(See *Chloasma*.)

Army Itch.—(See *Scabies*.)

Arnica. Eruptions from tincture of.—(See *Dermatitis medicamentosa*.)

Arsenic. Eruptions from tincture of.—(See *Dermatitis medicamentosa*.)

Artificial Eruptions.—(See *Feigned Eruptions*.)

Asphyxia, Local of Skin.—(See *Gangrene*.)

Atrophoderma pigmentosum.—(See *Angioma pigmentosum et atrophicum*.)

Atrophia cutis.—(See *Atrophy of the Skin*.)

Atrophy of the Skin. There are several forms of cutaneous atrophy, some of which seem to occur idiopathically and without obvious cause, while others are the result of some general disorder or of some injury to the nerves. In the "glossy skin" of writers upon nervous diseases, the extremities, especially the fingers, become pinkish or reddish, smooth, shining and glossy, as though varnished. The lesions resemble chilblains in appearance. The affection is accompanied by burning pain, and follows intractable neuralgia, wounds, and other lesions of the nerve trunks.

General idiopathic atrophy of the skin is a very rare condition, in which the skin becomes dark and discolored in

patches and swollen, then contracts, becomes of an olive color, and seems too small for the body. The sensibility of the skin is deadened and the movements of the body are effected with difficulty.



FIG. 9.—ATROPHY OF SKIN ("Geromorphism Cutanée").

Under the name *Geromorphism cutanée* Charcot* describes a curious form of congenital atrophy of the skin producing a curious senile aspect. Millard† reports a case where transverse striæ were disposed symmetrically on the anterior and external surface of the thighs a little below the trochanters subsequent to a severe attack of typhoid fever. The patient showed an abnormal rapidity of growth in height during this period.

Atrophia maculosa et striata.‡ Another form of atrophy of the skin is that known as "atrophic lines and spots." This form of atrophy may also be idiopathic or symp-

* Charcot, *ibid.* (Illustrations), and *ibid.*, vol. iv, 1893, p. 7.

† Ann. de Derm. et de Syph., 3d series, T., iv, 1893, p. 1332.

‡ F. G. Shepherd, Sajous, *Annual of the Universal Medical Sciences*, 1892, vol. iv, p. A. 13.

tomatic. In the first case it comes without apparent cause, the patient's attention often being attracted to the lesions only by accident, and after they have existed for some time. The lines (*striae atrophicæ*) are usually an eighth to one-quarter of an inch in diameter, and one to several inches in length; the spots (*maculæ atrophicæ*) are roundish or ovalish, and from a pin-head to a pea- or finger-nail size. Both lesions present a smooth, glistening, scar-like appearance, are perceptibly thinned to the touch, slightly depressed or grooved, and show a peculiar mother-of-pearl lustre. The lines are usually found in numbers running parallel to one another, and in an oblique direction. The spots are generally isolated. They may occur on any part of the body, but are usually found on the buttocks, trochanters, pelvis, and on the thighs, upon both extensor and flexor surfaces. They run a slow course, and give rise to no inconvenience. Their course is obscure; they are sometimes found in connection with morphea. (See *Morphea*.)

Symptomatic lines and spots of an atrophic character are those formed by stretching of the connective tissue bundles, as seen on the skin of the abdomen in pregnancy, etc. The atrophic diseases of the skin are rare, but 23 cases being reported in the American statistics out of 123,746, or .019 per cent. Occasionally this form of atrophy may follow severe diseases, as typhoid fever.

Hemiatrophia facialis. Unilateral facial atrophy is a trophic disease of the skin marked by a gradual withering of the tissues, affecting one side of the face and involving at first the cutaneous and subcutaneous tissues, and later the deeper tissues and bones. The affection begins as a circumscribed whitish, yellowish, or brownish discoloration of the skin, accompanied by rapid thinning. The discolored patch then sinks in, as a result of the atrophy of the subcutaneous tissues, and finally the thinned parch-

ment-like skin lies directly upon the bone, without, however, becoming adherent to it. The various appendages of the skin take part in the affection. The hairs turn white and sometimes fall out, the sebaceous secretion is perceptibly diminished, while the secretion of sweat is at times increased.

The appearances described are commonly at first and most markedly manifested in the sub-orbital or the lower maxillary region, but the chin, forehead, or temple may show the trophic depression. The disease may begin at various points simultaneously. In addition to involvement of the external tissues atrophy of the tongue and soft palate may occur. Hemiatrophia facialis runs a rapid progress at first, and later remains at a standstill for long periods, to take up fresh activity some time afterward.

Hereditary influence has not been proved. Women are more frequently attacked than men. The affection shows itself before the thirtieth year, and usually between the tenth and fifteenth year. Of two cases which have come under my observation, one was a boy, the other a young man of twenty, who, however, had had the affection some years.

The causes of the disease are not accurately known, and there is much diversity of opinion on the subject. By some the disease is due to some injury or disease of the sympathetic, by others due to some direct influence exerted on the trophic fibres of the trifacial or other nerves. Another theory is that the peripheral nerves are at fault, while some French writers conceive the disease to depend upon a primary atrophy of the fatty layers beneath the skin. Facial hemiatrophia has in several cases been observed to follow measles or scarlatina. One case is on record where the disease was bilateral, and another where the shoulder and wrist were involved as well as the face.

Hemiatrophia facialis may be mistaken for vitiligo or alopecia areata, but close examination will show an actual loss of substance which will distinguish it from these milder affections.

A diagnosis having been made, the affection, for practical purposes, passes out of the hands of the dermatologist. Electricity forms the most hopeful plan of treatment, but the prospect of restoration to health is highly unfavorable.

Atrophy of the Hair.—(See *Hair, Diseases of*, and *Alopecia*.)

Atrophy of the Nail.—(See *Nail, Diseases of*.)

Autographism.—This term has been applied by French writers to a condition, in which, if a pointed instrument is drawn over the surface of the skin, there appears a few moments later, following its track, a narrow elevated red line. Shortly afterward the center of the red line changes in color to a pale rose or white hue, and this condition endures for a considerable period of time, gradually fading away. A name may be written upon the skin by this means, and hence the designation "autographism."

The condition is usually present in connection with urticaria, and is often confounded with it. Autographism, however, is rather to be considered a symptom indicative of disturbed innervation of the skin, such as occurs in hysteria. It is probable that some of the hysterical eruptions believed to be feigned are in reality processes of the same nature, originally induced by rubbing or scratching certain parts of the skin, which are subject to abnormal sensations.

Autographism may be present for years in some subjects. In others it becomes noticeable in the spring, at the menstrual period, after some emotional disturbance, etc.

Baldness.—(See *Alopecia*.)

Barbadoes Leg.—(See *Elephantiasis*.)

Bakers' Itch.—(See *Eczema* of the hands.)

Barbers' Itch.—(See *Sycosis hyphogenica*.)

Baths in Skin Diseases.—The baths ordinarily employed in diseases of the skin are composed of water alone or water containing various substances in solution. The effects produced by baths upon the skin are of several kinds.* In the first place, the temperature of the bath, without regard to its constituents, has a certain effect, while the influence of water alone, or of substances which may be dissolved in it, may produce either a local effect, or, in the latter case, may bring about constitutional changes, according to the medicinal agent employed.

Lukewarm and moderately hot baths diminish irritability in the peripheral ends of the sensory nerves. For this reason such baths are useful in those skin diseases in which *pruritus* is a prominent symptom. General pruritus of an idiopathic character is nearly always relieved by the use of warm baths, which should in most cases precede the application of the more decided antipruritic remedies. The addition of indifferent substances, as starch, bran, oat- or corn-meal, serves to soothe the inflamed skin in eczema, particularly when the skin has been broken, leaving a moist surface. Here crude water alone sometimes irritates the skin, while the addition of some starchy substance soothes and relieves pain and itching. With a similar end in view, alkalies are added to baths, their soothing effect being probably due to some osmotic action, similar to that which takes place where carbonate of sodium solution is employed in dressing burns. In the intense dermatitis of burns, and in skin affections like pemphigus, where the patient is more or less flayed, the continuous tepid bath, as devised by Hebra, offers a medium in which the patient can live without such anguish as con-

* The recently ascertained fact that large numbers of bacteria exist upon the normal skin, which may be largely removed in an ordinary bath, makes the bath an important accessory in all forms of skin diseases.

stantly tortures him when exposed to the air, and even with some greater chance of recovery.

The question of the absorption either of water or of substances dissolved in water, through the uninjured skin, is one which has been discussed for many years without any perfectly satisfactory conclusion having been reached. Recent investigation, however, appears to indicate that imbibition of water, and of salts dissolved in water, may occur, so far as the superficial layers of the epidermis are concerned, in the bath, such imbibition being favored by warmth, long immersion, previous washing of the skin with soap, and repeated immersions. The fact seems to be that it is really imbibition rather than true absorption which takes place, just as a shingled roof may imbibe a considerable amount of moisture during a heavy rain only to give it out again under a heated sun, the interior of the house remaining perfectly dry all the time. Absorption, then, in the proper sense of the term, of water, and of non-volatile substances contained therein, has never been proved to take place through the skin of adults in ordinary baths, in spite of numerous researches and assertions tending to prove such a result.*

On the other hand, it is known that gases and volatile matters dissolved in water may be absorbed through the skin. Sulphurous acid and free iodine are thus taken into the system in baths, while free carbonic acid is not absorbed

* More recent experiments by Khrjonschtchevsky, in which a layer of oil was made to float on the aqueous medicated bath, in order to prevent evaporation or inhalation, and in which also the anus and urethra were sealed with collodion, indicate that various drugs may be absorbed.

Dogs and cats were killed by the cutaneous absorption of aqueous solutions of strychnia within two and a half or three hours. By the use of aqueous solutions of cyanide of potassium at the temperature of 77° F. (25° C.) in about an hour, while when the bath was at 107.6° F. (42° C.), the animals succumbed in about fifteen minutes.

excepting in the use of waters particularly rich in this gas, and then only in minute quantities.

With these facts in view, the use of baths in diseases of the skin is to be restricted to such cases as can in reality be benefited by them. Allusion has already been made to the use of warm-water baths in allaying irritation of the peripheral nerves. A further use is to be found in those more or less generalized skin diseases which are accompanied by diminution in the normal secretion of the skin, as *ichthyosis*. Here the heat and moisture induce further secretion, and the action of the water in macerating the rough, dry epidermis gives great relief and prepares the way for oleaginous emollients.

The simple warm bath, or the bath containing carbonate of sodium, also finds its place in the treatment of skin diseases accompanied by the formation of crusts and scales over a considerable area of the body. Maceration detaches these otherwise intractable masses and prepares the surface for direct medication. (See *Eczema*, *Psoriasis*, *Syphiloder-mata*, etc.)

The imbibition of water and watery solutions by the surface layers of the epidermis is taken advantage of in the treatment of parasitical diseases, particularly of scabies. Here the medicated water does certainly penetrate far enough to destroy the itch insect and its ova, and no further penetration is needed.

In boys, immersion for three and a half hours, in a bath of indigo-carminé, gave rise to a marked discoloration of urine. A bath of one ounce of infusion of digitalis in a pailful of water, developed the action of the drug on the pulse only after twenty-four hours or more.

This is only one of the various entirely contradictory reports put forth by experimental physiologists during the past few years. The subject, it seems to me, is in perfect confusion, and for practical purposes, it is to be wished that some competent dermatologist should endeavor to find out by experiment *if patients can, or can not, be cured by medication through baths.*

The employment of vapor baths to facilitate the penetration of medicinal substances is shown in the treatment of syphilitic eruptions by the mercurial vapor bath. Here the body, immersed in watery vapor until free perspiration takes place, is in a fit condition to absorb the mercurial vapor disengaged simultaneously.

An apparent exception to the rule of non-absorption of salts in watery solution is found to obtain in the case of infants treated for hereditary syphilis by baths of corrosive sublimate. A syphilitic infant placed in a small tub of water in which ten grains of corrosive sublimate have been dissolved will absorb a sufficient quantity of the drug, after several such baths have been taken on successive days, to influence the system and induce a rapid improvement in all symptoms. Whether absorption takes place through the unbroken integument or through the mucous membrane of the anal or genital orifices, I am unable to say, but the clinical fact is established that absorption does take place.

The following diseases are those in which baths may be employed at times with advantage: *Erythema*, *urticaria*, *eczema*, *pemphigus*, *lichen ruber*, *prurigo*, *psoriasis*, *pityriasis rubra*, *dermatitis*, *ichthyosis*, *scleroderma*, and the *neuroses* of the skin, particularly *pruritus*. The syphilitic eruptions of the skin, when generalized, are often relieved by mercurial baths acting locally in connection with internal treatment; while, in the case of infants, a general impression on the economy, as stated above, may be obtained by mercurial baths. Of course mercurial vapor baths have a constitutional as well as a local effect in adults. Parasitocides, chiefly sulphur and its compounds, act favorably in the form of baths in *tinea trichophytina*, and *tinea versicolor*; also in *scabies*. When used in *pediculosis vestimentorum*, baths are chiefly used as antipruritics. The insects causing the disease residing, as they do, in the clothing, are not destroyed by bathing. For further particulars regarding

the employment of baths reference may be made to the description of the more important of the affections enumerated above.

The following formulæ for the more commonly employed baths may be given in this place. The temperature of these baths should not, it is understood, vary much above or below 90° F. And since, to obtain their full effect, baths must often be prolonged to half an hour or even an hour, the temperature should be kept up by successive additions of hot water, and the room in which the patient takes the bath should be kept at an even warmth. Evening is the best time, in general, for taking medicinal baths, and the patient should be warned against going into the bath soon after a meal. These points seem elementary, but there is much ignorance upon the subject. The medicated baths commonly employed in diseases of the skin are the following:—

THE ACID BATH:—

R. Acidi nitrici fort., f ʒ iss
 Acidi hydrochlorici fort., f ʒ j
 Aquæ, C xxx. M.

Employed in *pruritus*, *urticaria* and *papular eczema*.

THE ALKALINE BATH:—

R. Sodii carbonat., ʒ iv
 Aquæ, C cxx. M.

Another —

R. Potassii carbonat., ʒ iv
 Sodii carbonat., ʒ iij
 Sodii biborat. ʒ ij. M.

Use one such powder in a thirty-gallon bath, with half a pound of starch, the latter previously boiled with water to make "clear starch."

Employed in *acute eczema*, *ichthyosis*, *psoriasis*, *erythema* and *urticaria*.

A formula employed for children is as follows:—

R. Pulv. sodii biborat., ʒ j
 Sodii carb., ʒ iij
 Potassii carb., ʒ iij. M.

Two to four teaspoonfuls for every gallon of water, with double the amount of dry starch.

THE CREASOTE BATH:—

R.	Creasotii (seu acid carbolici),	f ʒ ij	
	Glycerinæ,	ʒ ij	
	Aquæ,	C xxx.	M.

This is employed in *pruritus* and in certain cases of *squamous eczema*.

THE SULPHUR BATH:—

R.	Potassii sulphureti,	ʒ iv	
	Aquæ,	C xxx.	M.

This is employed in *psoriasis*, *pityriasis*, *acne* and *impetigo*, and as a specific in *scabies*. Another formula is the following:—

R.	Sulphur. præcip.,	ʒ iv	
	Sodii hyposulphit.,	ʒ j	
	Acidi sulphuric. fort.,	f ʒ j	
	Aquæ,	C xxx.	M.

This last is employed exclusively for *scabies*.

SUBLIMATE BATHS:—

R.	Hydrarg. bichlor. corrosiv.,	ʒ ij	
	Ammonii chloridi,	ʒ iiss	
	Aquæ,	f ʒ iiss.	M.

In a bath of thirty gallons.

This is sometimes employed in *pruritus*.

The sublimate baths, which are so useful in *infantile syphilis*, are composed of ten grains of bichloride of mercury to each bath, in a child's bath tub. Tan baths, containing a handful of fresh tan-bark to each bath, have been recommended in *purpura*. Tar baths are employed by rubbing tar into the diseased parts of the patient's skin and then employing an ordinary water-bath. They are used in *psoriasis*.*

*As regards other forms of hydrotherapeutics in the treatment of diseases of the skin but little is known.

Beni-Barde (*Jour. des Mal. Cut. et Syph.*, Dec., 1893, p. 705) has recently published a paper on the hydrotherapeutics of the dermatoneuroses, by which term he includes those affections of the skin which are due to some disturb-

The natural mineral springs which have always enjoyed a high reputation in diseases of the skin, owe it almost, if not entirely, to the properties of the water alone or to gases dissolved therein. The various mineral ingredients are contained in too small quantities to exercise the effect they are usually found to produce, and, until far more accurate observations shall have been made than are at present on record, a well-founded skepticism as to the modes of action of mineral springs must continue to exist.* However, whatever our theories on the subject, it cannot be denied that certain skin diseases are at times benefited by recourse to the various health resorts where such springs are found.

Bed-bug.—This insect is occasionally the cause of an urticaria-like eruption on the skin, which is liable to be mistaken for other diseases. The lesion produced by its bite is of the nature of an urticarial wheal, consisting of a circumscribed, slightly raised, split-pea sized erythematous spot, with a whitish centre, and at times attended with

ance of the central or peripheral nervous system, whether functional or manifested by tissue alteration.

Experiments made in cases of lichen planus, prurigo, and one or two other affections, show the success of this form of treatment when other methods have failed. The sedative douche is the form usually most efficacious. It consists of the application of water at a temperature of 95°F. projected through a large rose throwing abundant streams. To obtain the full sedative action it is necessary to use attenuated force and to continue the douche only about three to six minutes. The patient should be dried off by the very gentle application of towels, no rubbing being employed. The temperature of the water may be varied slightly above or below 95°F. to suit the individual case, and in some very irritable cases a gentle indirect stream should be used.

* A visit to the Strathpeffer Spa, in the Highlands of Scotland, made several years ago, has caused me to modify somewhat my views upon this subject. Under the careful and scientific guidance of the Resident Physician, Dr. Fortescue Fox, patients suffering with some forms of eczema are unquestionably benefited by the strong sulphur baths, and thermal waters of that resort.

considerable swelling. A reddish blood spot, or hemorrhage, under the skin remains after the wheal has subsided. The sensation is at first of a very slight prick, followed in a few minutes by burning and itching. In children the disease is often taken for "hives" or nettlerash" (urticaria). The bites of the bed-bug may be relieved by lotions containing alcohol, carbolic acid, vinegar, dilute acetic acid, corrosive sublimate, lead water, spirits of hartshorn, etc., sponged upon the parts. The best preventive against bugs in beds and other haunts is solution of corrosive sublimate. Pyrethrum powder is also useful.

Biskra Bouton (*Aleppo Bouton*, *Delhi Sore*, etc).—A tropical affection occurring endemically, chiefly in Algeria, Egypt, Syria, and Hindoostan. In the present active commercial relations between all parts of the world such affections are apt to be met with sporadically in all chief centres of population, and hence a brief description is desirable.

Biskra Bouton is a contagious affection of uncertain origin, supposed to become implanted in the skin through some accidental abrasion. It has a variable period of incubation, from three or four days to as many months.

The first symptom is that of itching in the affected part followed by the appearance of a reddish macule which develops into a conical papule. Desquamation then occurs; the scales, which at first are fine, thin, and dry, becoming thick, and gradually the area of the lesion extends, it becomes more indurated, taking on a dusky terra cotta color and later a brighter red. Extension may also occur by the formation of smaller lesions around the original one which subsequently amalgamate. Itching becomes more severe with the progress of the disease and the affected part becomes painful on pressure.

As the disease progresses, small yellowish-white points show themselves deep in the skin and develop into points of ulceration, and the central lesion becomes covered

with a thick, adherent yellowish-brown crust. When this crust is removed the derma beneath is seen to be bright red, swollen, infiltrated, and covered with a limpid, serous, sero-purulent, or ichorous discharge, and shows a papillomatous aspect with more or less numerous small, deep ulcers corresponding to the yellowish points. Around the margin of this lesion numerous small, yellowish points may be seen, showing that the process is still going on in the neighborhood.

The area of the lesion in Biskra Bouton varies from one-sixth inch to several inches in diameter. The neighboring lymphatic ganglions may be involved and lymphangitis or phlebitis may accompany the progress of the disease.

The lesions may be single, but are more frequently multiple. The uncovered parts of the body are most frequently attacked, the hands, forearms, feet, legs, and face, although any part of the body may be involved. It is said that one attack gives immunity from the disease for a considerable time.

Histologically, the tumors are composed of embryonal tissues, but this, of course, throws little light on their true nature. There is every reason to believe the disease due to the prevalence of some bacillus, as the manner of its appearance and spread bears close analogy with known affections of this character. The nature of the bacillus has, however, not yet been ascertained.

The treatment of Biskra-Bouton should be tonic internally, arsenic, iron, quinine, cod-liver oil, etc., being required in most cases.

Locally antiseptic soaps and applications to the neighborhood of the disease, or perhaps, in some cases, to the whole surface, make further implantation of the poison less likely to occur. It is usually recommended to leave the crust intact, but when thorough treatment can be carried out I should think it better to remove all debris, which may

remain a nidus for the propagation of the disease, by antiseptic poultices. A starch, bread and milk, or flaxseed poultice, abundantly sprinkled with boric acid should be applied, and when the moist surface is exposed this may be cleansed with a 1-1000 solution of corrosive sublimate and the open ulcers wiped out with small swabs covered with ichthyol. Powdered iodoform, aristol, etc., may then be dusted over the surface and covered with boric cotton. Extreme cleanliness and the constant removal of pus, etc., with disinfection, probably offers the best chance for rapid recovery.

Belladonna Eruptions.—(See *Dermatitis Medicamentosa*.)

Beigel's Disease.—(See *Hair*.)

Bloody Sweat.—(See *Purpura*.)

Body Louse.—(See *Pediculosis Vestimentorum*.)

Boil.—(See *Furuncle*.)

Bromidrosis (*brom'-idrosis*).—Bromidrosis is a functional disorder of the sweat glands, characterized by more or less sweating and an offensive odor. The affection may be local (it usually occurs on the soles) or general. The odor may be of a general disagreeable character or it may be distinctive, resembling the smell of a goat or of urine. Cases have been reported where an odor resembling that of violets or pineapple has been exhaled during attacks of hysteria, anger, or sexual excitement. The treatment is that of hyperidrosis. (See *Hyperidrosis*.) Salicylate of sodium, in five-grain doses, has proved useful in cases depending on nervous excitement.

Bromine Eruption.—(See *Dermatitis Medicamentosa*.)

Callositas (*callos'-itas*).—Callosities are those hard, thickened, horny patches of skin, of variable size and shape, grayish or yellowish in color, unattended by pain, and which occur for the most part about the hands and feet. They are composed of an increased quantity of growth of

the epidermic layer of the skin. They commonly occur at some point where the occupation of the individual gives occasion to unusual pressure and friction, so that in many cases the profession of the patient can be surmised from the locality of the thickening. Occasionally, however, they appear to occur spontaneously.

When the callosity causes pain or inconvenience, it is to be removed by means of local measures. The part should be soaked repeatedly in warm water, or macerated by a water dressing or a poultice, and when it is softened, it may be scraped or pared off, layer by layer, by means of a sharp knife. The plasters of india rubber containing salicylic acid, made by Johnson and Johnson, are valuable in severe cases.

Cancer of the Skin.—(See *Carcinoma*, *Epithelioma*, and *Sarcoma*.)

Canities (*canish'-ies*).—Graying or whitening of the hair. It may be senile or premature. Premature graying of the hair may occur under a variety of circumstances, and may be partial or universal. It rarely takes place before adult life. Usually when the hairs have once turned gray they remain so, but sometimes recover their color. Occasionally the hair is found to turn gray in winter and dark in summer. Cases have been reported (Wilson) when the hair has grown out in alternate bands of gray. The hair may turn gray after severe illness, after injuries or diseases of the nerves, or after ligation of the carotid. In one case coming under my care, a woman with red hair lost it almost entirely from alopecia areata. As the hair began to come back, after some months' treatment, it was at first quite gray, but afterward recovered its color. In a case of lupus erythematosus of the scalp, under my care for several years, the hair, which was absent entirely while the disease was present, began to return as the patient recovered, but instead of being brown, as before, was found

to be of a dark gray tint. The question as to whether the hair may turn suddenly gray, in a single night, for instance, has been much discussed. I think a sufficient number of authentic cases have been published to prove that this can certainly occur. Internal remedies have no effect in restoring the color of the hair, although when due to fevers or other constitutional affections in the young the natural color often returns. Tonics, particularly arsenic and strychnia, are of advantage in such cases. Dyeing is the only resort.*

Cannabis Indica, Eruptions from.—(See *Dermatitis Medicamentosa*.)

Carbuncle.—Carbuncle is a hard, more or less circumscribed, dark-red, painful, deep-seated inflammation of the skin and subcutaneous connective tissue, variable as to size, terminating in a slough. Carbuncle is usually accompanied by a good deal of constitutional disturbance. It is ushered in by a chill followed by fever. The skin over the affected part becomes hot and painful, and a firm, flat, more or less sharply circumscribed inflammation, of a somewhat dusky red hue, forms, which is deeply seated in the tissues. It is painful, with commonly more or less of a burning sensation. The symptoms become gradually more marked during ten days to two weeks, when the tissues begin to break down and soften, and the skin becomes gangrenous. Perforations appear at various points, either filled with tough, yellow, fibrous *cores*, or hollow; and from these issues a yellow, sanious fluid. The surface soon assumes a cribriform or sieve-like appearance, which is very characteristic. Unless the carbuncle is small the whole skin covering it usually sloughs sooner or later, leaving a large open ulcer, healing slowly.

The duration of carbuncle is usually from four to six

* For a description of various hair dyes, etc., see Brocq, *l. c.*, p. 666.

weeks, though its course depends somewhat on the age and strength of the patient. It is usually single, and its favorite seats are on the back of the neck, shoulders, back, and buttocks. The hairy scalp, the front of the abdomen, and the lips are all looked upon as situations of especial danger. Carbuncle attacking the upper lip is believed to be an especially fatal variety. It is apt to be found in young persons, runs an acute and rapid progress and is apt to lead to a fatal result from pyæmia. This form of disease is by some believed to be a variety of malignant pustule. Against this view it may be stated that pain and the presence of pus in considerable quantities are characteristic of this form of disease, while both of these are, to a great extent, absent in malignant pustule. (Cameron.) In elderly persons carbuncle is a serious disease, and when extensive is apt to terminate fatally. Boils often appear about the borders of carbuncle. The affection sometimes occurs in connection with diabetes and Bright's disease.

The cause of carbuncle is the invasion of the part by the same staphylococcus which gives rise to furuncles. The disease is not, however, a group of boils, but a much more deeply-seated and serious affection.

Carbuncle is distinguished from furuncle by its size, flatness, multiple points of suppuration, and extensive slough. From erysipelas, which it sometimes resembles in its early stages, its circumscribed outline will soon distinguish it.

The general treatment of carbuncle should be strongly supporting. Nourishing food must be freely given, and in some cases stimulants, although sparingly and with caution. The best opinion is opposed to the excessive and indiscriminate use of stimulants formerly customary. Tincture of iron and quinine are the best medicines. The latter should be given in sixteen to twenty-five grain doses once daily. Anodynes should be given freely when re-

quired to procure rest at night. Fresh air and exercise, when these can be taken, are important factors. When the carbuncle is tense and hard antiseptic poultices, preferably made with a 1-2000 solution of corrosive sublimate, and deep, cruciform incisions for relief may be resorted to when required, and when practiced with the addition of thorough antisepsis and the application of strong parasiticide remedies is perhaps the best procedure. Agnew suggests painting cantharidal collodion around the carbuncle in a broad band, the effect of the blister being to remove the tension. Ashhurst strongly recommends compression by means of adhesive strips, as in swelled testicle, applying them first at the margin and gradually bringing them more and more inward, leaving a space at the centre to allow the slough to come out. Both of these plans have the advantage of restricting to some extent the diffusion of the pathogenetic germs. Among dressings, Hebra recommends cloth wrung out of cold water, or ice bags, in the early stage.

The parts should be kept clean, washed frequently with a weak carbolic acid solution, and the slough removed as rapidly as possible, so as to leave a minimal amount of diseased tissue in contact with the springing granulations. Scraping out the dead tissue thoroughly and afterward packing with an antiseptic, as iodoform, has been recommended, and is, I think, good treatment. Antisepsis lies at the foundation of all modern local treatment of carbuncle. The first thing to do is to get at the noxious germs and destroy them, remembering always not to use such vigorous treatment as will further inflame the tissues. To the antiseptic treatment should be added such soothing remedies as are admissible. The following abstract of the system pursued by Verneuil in the hospitals of Paris will indicate the principles to be followed :—

Commencing as early as possible, a 2 per cent. spray of

carbolic acid is directed upon the affected area for some two hours two or three times a day. In the intervals the part is kept covered with some antiseptic dressing. This treatment alone is often enough to avert the carbuncle, but if tension becomes extreme or suppuration shows itself a number of incisions (under chloroform) are made around the periphery of the lesion. The incisions are one to two inches in length and involve the whole thickness of the indurated tissues.

Sometimes the thermo-cautery is used to remove portions of the diseased tissues.

Hallopeau (*Jour. des Mal. Cut. et Syph.*, January, 1893) thinks that carbolized oil is more penetrative than other remedies. He employs the crystallized acid, one part in ten of oil, dissolved by the aid of heat. Glycerine may be substituted for the oil. The entire surface of the carbuncle is impregnated with this oil and then covered with a starch poultice, after having emptied so far as possible any suppurating cavities which may be present. The applications are made once or twice daily.

The neighboring parts are likewise anointed, any pustules which may be present having been previously opened.

When the ulcer begins to granulate it must be encouraged to heal. The prognosis should be extremely guarded. Death may occur from exhaustion, pyæmia, collapse, or, when the scalp is affected, by inflammation and effusion within the cranium.

Carcinoma.—The commonest form of cancer of the skin is *epithelioma*, and under this head will be found a description of the various forms of this variety of cancer.

The other varieties of primary or secondary cancer of the skin are the following: 1. *Carcinoma lenticulare* ("scirrhus," "hard," "fibrous," or "connective tissue" cancer); characterized by smooth, glistening, dull pinkish or brownish red, flat or raised papules, tubercles or no-

dules, from pea- to bean-, or larger size, disseminate, at first separate, later running together, slow in its course, involving the neighboring glands, causing pain, breaking down, recurring on excision and ending fatally. 2. *Carcinoma tuberosum*; a rare affection, occurring in flat or raised, rounded or ovalish, tubercular or nodular lesions, from pea- to walnut size or larger; firm, hard, deeply imbedded in the skin and the subcutaneous connective tissue, of a dull reddish, brownish red or violaceous color, multiple, disseminated, or irregularly grouped, sooner or later breaking down into ulcers and ending fatally. 3. *Carcinoma melanodes* or *pigmentodes*; beginning in the form of multiple, small, pin-head, or bean-sized, rounded or ovalish, soft or firm papules, tubercles or nodules, of an iron-gray, brownish, bluish black or blackish color, at first discrete, but tending to aggregate into tumor masses, and then to break down and ulcerate, forming often fungous, gangrenous, and pultaceous masses, commonly found starting in a mole or wart on the face or on the hands and feet, usually encountered in early adult or middle life, and pursuing a malignant course. 1068 cases of carcinoma are reported in the "American Statistics" in a total of 123,746 cases of skin disease observed by dermatologists, being .863 per cent.

The treatment of these forms of cancer, when early seen, is essentially the same as that described under epithelioma and sarcoma. Later they necessarily fall under the care of the surgeon.

Chancre.—

DIFFERENTIAL DIAGNOSIS

BETWEEN

CHANCRE.

1. Incubation on an average from fifteen to thirty-five days.

CHANCROID.*

1. No incubation or a very brief interval between inoculation and development.

* A full description of these lesions does not come within the scope of this work, but as they are liable to be mistaken for one another and for non-syphil-

CHANCRE.

2. Derived from the contagion of a chancre, of a secreting secondary syphilitic lesion, or, in some cases, of the blood of a person suffering from secondary syphilis.

3. Usually single, rarely multiple, never confluent.

4. Non-inoculable on the patient.

5. Begins by a simple erosion or in some cases by a papule.

6. When fully developed the chancre is a superficial ulceration with sloping edges melting insensibly into the surrounding tissues, the centre covered in part with false membrane, the border bright red, usually of regular outline. Very little suppuration.

7. Chancre is rarely painful.

8. In ninety-eight cases out of one hundred, induration of the base is present; an elastic induration, gristly, having more of the character of an inflammatory induration.

9. The lymphatic ganglia in the neighborhood enlarge, harden, and become gristly, without suppuration. The lymphatic vessels also become indurated at times.

CHANCROID.

2. Derived from the contagion of a chancroid or of a suppurating chancroidal bubo.

3. Almost always multiple; often confluent.

4. May be inoculated any number of times on the patient. The pus of the suppurating chancroidal bubo is also inoculable.

5. Begins as a vesico-pustule.

6. When fully developed, the chancroid is a somewhat deep ulcer, of which the base is covered with a sort of organic detritus mixed with pus. The edges are almost perpendicular and sharply defined.

7. Chancroid is almost always painful.

8. Chancroid is often accompanied by inflammatory hardness, but never by syphilitic induration.

9. Chancroid is often accompanied by adenitis or lymphangitis of phlegmonous character, suppurating sometimes, and furnishing occasionally an inoculable pus.

itic affections, particularly about the genitalia, I have thought best to introduce the diagnostic table given above. (See also *Herpes progenitalis*).

CHANCRE

10. Chancre is a lesion which gives rise to very little local reaction; it tends to spontaneous cure; it ulcerates only slightly; it rarely takes on phagedæna or gangrene; it follows a regular course.

CHANCROID.

10. Chancroid is a rather serious local lesion; it has a strong tendency to ulceration; it follows a very irregular course, and does not tend to cure as chancre does. Phagedæna and gangrene are relatively frequent complications of chancroid.

Occasionally both syphilis and the chancroidal virus are transmitted simultaneously. In such cases the symptoms of chancroid develop first, and later those of the syphilitic lesion are super-imposed.

Chaps.—(See *Eczema fissum* and *Eczema of Hand*.)

Charbon.—(See *Malignant Pustule*.)

Cheiro-pompholyx.—(See *Dysidrosis*.)

Chilblain.—(See *Dermatitis congelationis*.)

Cataplasm.—(See *Poultice*.)

Chloral, eruption from.—(See *Dermatitis Medicamentosa*.)

Chloasma (*klo-as-ma*).—Chloasma, sometimes called “melanoderma,” is a discoloration of the skin, occurring in variously sized and shaped patches, of a yellowish, brownish, or blackish tint. It may occur over a part or over the entire surface, and may be idiopathic, the result of external agencies, as scratching, blistering and heat, or symptomatic. Belonging to the latter category may be mentioned “chloasma uterinum,” the pigmentation of Addison’s disease, and those discolorations which occur in connection with certain general diseases, as tuberculosis, cancer, malaria, etc.

The most important variety of chloasma is *chloasma uterinum*, which consists in the presence of one or several patches of pigment deposit, appearing usually about the forehead, extending across from side to side, from below the base of the scalp to just above the eyebrows, in a broken or continuous band. Occasionally the whole face may be covered, as with a mask. The discoloration may also occur elsewhere on the body. The affection occurs between

puberty and middle age, is more frequent in married women, and is caused by pregnancy or by uterine derangements. In single women it generally occurs between the ages of thirty and forty, and does not show itself after the climacteric period, either in the single or in the married.

Chloasma is apt to be mistaken for *tinea versicolor*, on account of the similarity in color. The distribution of the disease is, however, quite different (see *Tinea versicolor*), and the presence or absence of the fungus always found in the latter disease on microscopic examination will settle the question. The treatment of chloasma should first be directed to the removal of the cause, when this is possible. Without this all external treatment is apt to be disappointing. The discoloration may be removed from the skin temporarily, by means of certain washes which cause desquamation of the superficial layers of the epidermis. These must be used at first with some caution, to prevent a too severe action upon the skin. The following formulæ may be suggested :—

R. Hydrarg. chlor. corrosiv., gr. vss
 Zinci sulphatis,
 Plumbi subacetatis, āā ʒ ss
 Aquæ, f ʒ iv. M.

SIG.—Lotion. Apply morning and evening.

The following formula is recommended by Bulkley :—

R. Hydrarg. chlor. corrosiv., gr. vj
 Acidi acetici diluti, f ʒ ij
 Boracis, ʒ ij
 Aquæ rosæ, ad f ʒ iv. M.

SIG.—Lotion. To be applied night and morning. At first this may be gently brushed over the affected parts, which may afterward be rubbed well with it. If the skin becomes too scaly, this application should be suspended for a day or two, and lanolin cold cream should be applied.

The following ointment has been recommended :—

R. Hydrargyri pur.,
 Ung. hydrargyri,
 Sevi benzoinati, āā gr. c
 Adipis benzoinati, ʒ iv. M.

SIG.—Rub in thoroughly with the finger, or spread upon muslin and apply every night.

During the day the following paste is to be spread thinly upon the parts :—

R.	Bismuthi oxychloridi,			
	Amyli oryzæ,			
	Pulv. kaolini,	aa	gr. 1	
	Glycerinæ amyli,		℥iv.	M.

Brocq strongly recommends the following procedure, which he has found useful not only in ordinary chloasma, but also in that peculiarly annoying form which accompanies pregnancy.

Brocq paints the affected parts, morning and evening, with a 5 per cent. solution of bichloride of mercury. Then during the night the *emplastrum de Vigo** is applied. The next morning the plaster is removed, using cold cream or some other unguent. If the skin is very red, oxide of zinc or subnitrate of bismuth ointment may be applied through the day, but a better application is the following :—

R.	Kaolin.,	℥j	4 Gm.
	Petrolatis,	℥ijss	10 “
	Glycerinæ,	℥j	4 “
	Magnesii carbonat.,		
	Pulv. zinc. oxid.,	aa	℥ss 2 “

* The *emplastrum de Vigo*, of the French Codex, is composed as follows :—

R.	Emplastrum simplex,	pts. cc	
	Ceratæ flava,	x	
	Colophoni,	x	
	Gummæ ammoniac., purif.,	iiij	
	Bdellium,	iiij	
	Olibani,	iiij	
	Myrrhæ,	iiij	
	Saffron,	ij	
	Hydrargyri vini,	lx	
	Styracis liq., purif.,	xxx	
	Terebinthinæ,	x	
	Ol. lavandule,	j.	M.

The bdellium, olibanum, myrrh, and saffron are powders. The styrax is triturated separately in a warm iron mortar, and afterward the turpentine and oil of lavender are added. The mercury is then added to this mixture, one globule at a time, until all have disappeared.

The simple plaster, wax, colophony, and gum ammoniac are melted together, and the first-named powdered mixture is carefully incorporated. Then, when the plaster has nearly cooled, the mercurial mixture is incorporated, stirring

Argyria is a form of discoloration of the skin resulting from the ingestion of the nitrate or any other salt of silver. The skin is usually affected over the whole surface, but those parts which are exposed to the light are most markedly involved. The mucous membranes, as the conjunctiva, the internal surface of the cheeks, etc., are usually involved; in fact, the first symptom of the affection is usually a blue line along the gums similar to that observed in lead poisoning. The color of the skin in argyria is grayish blue, with sometimes a metallic lustre.

Argyria only appears after a prolonged use of silver, but once established is commonly incurable. However, iodide of potassium is said to have been of use.

Chloral, Eruptions from.—(See *Dermatitis medicamentosa*).

Chromidrosis.—An affection of the sweat glands in which the secretion poured out is discolored, being usually blue or bluish black. The so-called red and yellow chromidrosis is usually rather a parasitic growth on the hairs. (See *Hair, Diseases of*.)

In chromidrosis the quantity of sweat secreted is always increased. The affection occurs chiefly in hysterical women and usually affects the face, particularly the lower eyelids, the chest, abdomen, the scrotum (in the few cases reported in males), the arms, and the feet. It commonly appears in an intermittent manner, following emotional excitement, or without appreciable cause.*

the mass until entirely cooled. Then make into rolls. Most apothecaries have in stock an *emplastrum de Vigo*, which contains all the essential ingredients of the above.

* Hechelin (*Sajous' Annual*, 1895) reports the case of a boy ten years of age who displayed blue chromidrosis on the nose following a contusion. Exercise or emotion caused the color to show more distinctly as a blue perspiration. The coloring matter dissolved in chloroform and showed irregularly crystalline forms under the microscope. It appeared to be some derivative of indigo.

The pathology of chromidrosis is very imperfectly understood. The blue color has been said to be due to the presence of a phosphate of iron (Scherer), to a compound of cyanogen analogous to pyrocyanine (Schwartzzenbach), to a microbe, to a microscopic fungus, to indican, or Prussian blue (Bizio, Apjohn, Foot, etc.).

Some observers have supposed this form of chromidrosis to be merely a simulated affection. I think, indeed, that some cases have been feigned, but the majority are unquestionably genuine.

The treatment should be stimulating and astringent. The following ointment will be found useful:—

R.	Acid boric,	gr. x	
	Acid salicylic,	gr. xv	
	Ung. aquæ rosæ,	ʒj.	M.

The customary treatment for hyperidrosis will also prove useful in severe cases. A general tonic treatment will usually* be found indicated.

Clavus.—Clavus or corn is a small, circumscribed, usually flat, deep-seated, more or less horny formation, painful upon pressure, situated for the most part about the toes. Like the callosity, it is the result of pressure, and this, if continued, may give rise to inflammation. The common seat of the corn is the outer aspect of the little toe and the tops of the toes. Occurring between the latter,

* Le Roy de Mericourt (*Deutsche Med. Zeitschr.*, 1884, No. 27) reports a case of rose-colored eruption upon the cheek and neck, in a boy of twelve, so profuse as to stain the collar red. With a lens, reddish granules could be perceived between the layers of the epidermis; subsequently, bluish areas appeared on the periphery of the red patches. J. C. White (*Jour. Cut. and Ven. Dis.*, 1884, No. 10) reports the case of a young German, who for six months had found the left side of his shirt stained of a yellow color not entirely removed by washing. The patient perspired freely, but not more on one side than the other. The treatment consisted in rubbing on an ointment of boric and salicylic acids. These two cases seem to form a connecting link between true chromidrosis and the parasitic affection of the hairs of the axilla, etc. (See *Hair, Diseases of*.)

the corn is accompanied by more or less maceration, and is known as a "soft" corn. The cause of corns is to be found in ill-fitting or too tight shoes. The growth is made up of a circumscribed, excessive development of the epidermis, and of a central portion or core. The latter extends quite deeply into the tissues, in the form of an inverted cone, the base being directed outward, and appearing on the surface as a rounded spot. The apex of the corn rests on the papillary layer of the corium. The pain attending corns is produced by the core pressing upon the true skin, causing irritation of the nerve filaments of the papillæ.

The first principle in the treatment of corns is the removal of the cause. Tight or badly-fitting shoes must be changed for others or modified in shape. The next point is the removal of the mass of epidermis. The professional chiropodist prefers to do this while the corn is dry, because its limits are better defined. Most persons, however, will object to the pain this is apt to cause, and I think it better, as a general thing, to first soften the epidermis by means of a poultice, or by covering the corn with a bit of patent lint, soaked in solution of sodium carbonate, and covered with a piece of oil silk or wax paper. The outer layers being thus macerated, may be removed by picking or scraping them with a sharp knife, care being taken not to penetrate and wound the sensitive tissues. The corn should be protected from pressure by a plaster, as the "emplastrum fuscum":—

R.	Plumbi oxidi rubri,	℥ iv	
	Olei olivarum,	f 3j	
	Ceræ flavæ,	℥ ij	
	Pulv. camphoræ,	gr. x.	M.

Boil the lead oxide and the oil together until a brownish-black mass is formed; then add the other ingredients, while still hot.

R.	Acid salicylic,	1 Gm.
	Ext. cannabis ind.,	50 Gm.
	Alcoholis,	1 Gm.
	Ether,	2 gr. 50 Gm.
	Collodion flexile,	5 Gm.

Or diachylon plaster may be used. It should be spread upon soft leather or chamois, and have a hole cut in the centre. The corn plasters in felt, of ring shape, which may be procured in the shops, answer an excellent purpose. The salicylic rubber plaster now made in this country is perhaps the best form of plaster, however. Corns which have become inflamed must be cared for assiduously, or they are likely to give much trouble. Perfect rest, for a time at least, is required in these cases, and some soothing application. Poultices of bread crumb and dilute lead water, applied cold, exercise a powerful sedative action. Soft corns are best treated by excision, when this is possible. Nitrate of silver in solid stick, glacial acetic acid, flexible collodion, powdered oxide of zinc or tannic acid, are all useful. The toes should be separated by a thin layer of raw cotton.

Colloid Degeneration of the Skin (*Colloid Milium*).—This extremely rare affection is characterized by the appearance in the skin of numerous small tumors—rounded, flat, or raised—the size of a pin's head to a split pea, of a pale or lemon color, bright, shining, and translucent. They look like vesicles, but when pricked are found to be firm, or to exude a little blood and transparent gelatinous fluid. The process is a colloid degeneration of the connective tissue of the corium. The lesions have also been observed on the cornea and the septum nasi. The treatment is removal by scraping with the sharp spoon, when this is practicable.

Comedo (*kôm-ê-do*).—Comedo is a disorder of the sebaceous glands, characterized by yellowish or whitish, pin-head size elevations, containing in their centre blackish points. Very often the black points appear alone upon the unchanged skin. The disease is observed chiefly about the face, neck, chest, and back. Each single elevation is called a comedo (plural comedones). The common name, "flesh

worms" or "grubs," is calculated to convey the erroneous idea that the small inspissated plug of altered sebum which can be expressed from the follicle is a parasitic worm. It is true that a little mite, the microscopic *Demodex folliculorum*, is occasionally found in the mass (see *Demodex folliculorum*), but this cannot be regarded as in any way essentially connected with the disease. Its presence is merely fortuitous and without significance, the plug consisting of altered sebaceous matter, mingled with epithelial cells. The affection, though comparatively trifling, and without subjective symptoms, is often extremely annoying to patients. It is due in part to idiosyncrasy, in part to a general sluggish performance, not only of the functions of the skin, but also of those of the whole body. Patients are apt to suffer from dyspepsia and with constipation. In young women chlorosis and menstrual difficulties are apt to be present. The disease is pre-eminently one of the period of puberty; patients seeking relief from this complaint are almost invariably young men and young women, although the disease may occur in infants and young children.

G. H. Fox * reports a case in which the lesions were confined to the face, resembling the eruptions of acne, lupus, or syphilis. The smaller lesions were firm, flattened, and of a dull red hue. Those which were rounded on the surface had a translucent "apple-jelly"-like appearance, and presented a whitish point at the summit. The tumors were pin-head to large pea sized, and the larger lesions when aggregated formed a tumor from which firm pressure could force out blood and pus. There was no pain or itching.

The eruption had appeared suddenly, and was of six weeks' duration when seen by Dr. Fox.

The eruption disappeared spontaneously at the end of nine months, leaving pock-marks.

* *Journal of Cutaneous and Venereal Diseases*, 1893, p. 56.

Microscopic examination showed the tissue to be of a tubercular character.

Ohmann-Dumesnil has described a curious form of comedo, "double comedo," when two comedones are connected together forming a sort of tunnel in the skin.

Crocker and other English dermatologists have reported a form of comedo occurring in children, which appears to be contagious. It occurs ordinarily on either side of the forehead in groups, rather than disseminated irregularly as the lesions of ordinary comedo are.

Local treatment suffices in some cases to relieve the condition. Frequent bathing of the affected surface with hot water will aid the process of removal. Stimulating ointments, especially such as contain sulphur, are useful, as the following :—

R.	Sulphur. præcipitat.,	℥j	
	Ung. aquæ rosæ,	℥j.	M.

SIG.—To be rubbed in at night.

Sulphur lotions, such as those given under the head of acne, may also be useful. Should the skin tend to become harsh under the use of these remedies, weak alkaline ointments may be used for a time, as this :—

R.	Sodii biborat.,	℥ ^{ss}	
	Glycerinæ,	℥ ^{xvj}	
	Ung. aq. rosæ,	℥j.	M.

An excellent application is the following :—

R.	Aceti,	℥ij	
	Glycerinæ,	℥ij	
	Kaolini,	℥iv.	M.

This forms a soft paste, which is to be spread over the surface at night, and, if possible, in the morning also. If applied on the face, the eyes should be kept shut, on account of the pungency of the vinegar. It loosens and dislodges the sebaceous plugs more satisfactorily than any other preparation with which I am acquainted. A watch-key may be employed to press out the comedones, the end being gently

but firmly pressed down over the sebaceous plug. Should this not yield readily, the point of a fine needle may be run into the follicle, alongside of the comedo, and then moved around, so as to loosen and detach the plug from its surrounding wall. Care should be taken not to use too much force, for fear of inflaming the skin. The staphylococcus pyogenes is usually present, and if pressed down into the succulent tissues in the neighborhood finds its favorite pabulum that gives rise to a pustule. If the comedo plug does not come out easily, it should be left for another time. It must be remembered that so long as the condition which produces comedo is present and effective, the comedones are apt to be reproduced. Several in succession may have to be removed from the same glandular opening. Occasionally the tonic internal treatment required in acne (see *Acne*) is required.

Sometimes the contents of the sebaceous follicles become even more condensed and hardened than above described. The firm, almost horn-like plugs are gradually forced out of the mouth of the follicles, until they may stand up stiffly above the surface of the skin. Such a case came under my notice some years ago, the skin of the body, particularly over the shoulders, being the seat of the disease. The hardened sebaceous plugs, in great numbers, projected to the height of an eighth to a quarter of an inch, giving the surface of the skin a nutmeg-grater appearance, viewed from a little distance. Hot baths, frictions with *sapo viridis*, and inunction of officinal sulphur ointment may be used in such cases. Occasionally a horny outgrowth occurs in comedo. Sometimes this is a keratosis (see *Keratosis*). At other times, as in a case I once had under observation, a bunch of fifteen to twenty hairs are found growing out of each lesion.

Condyloma.—(See *Verruca*.) The name of “condyloma lata,” or “flat condyloma,” has sometimes been given

to the moist syphilitic papule. This term leads to confusion, and has been dropped by most modern writers. There is but one condyloma, which has nothing syphilitic about it, although it may occur on a syphilitic patient, just as he might have an ordinary wart on the finger.

Corns.—(See *Clavus*.)

Cornu Cutaneum.—Cutaneous horns are hypertrophic growths or excrescences of the skin, which, when fully developed, differ slightly, if at all, in structure, from those



FIG. 10.—CORNU CUTANEUM.

found normally in the lower animals. They are solid, hard, dry and wrinkled, or laminated. In form the growth is usually elongated and roundish or conical; sometimes it

assumes a flattened or button-like form. The horn is often twisted and misshapen. The color varies through gray to

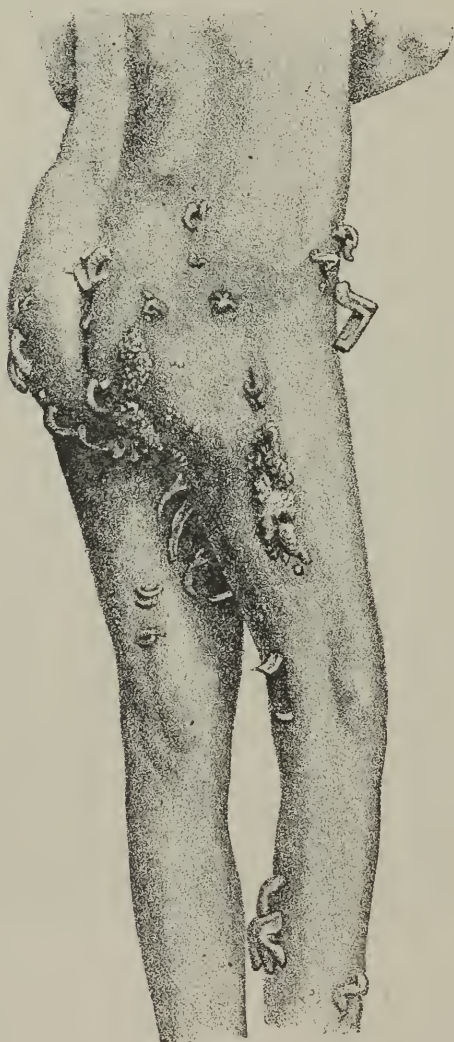


FIG. 11.—CORNU CUTANEUM. (*After Bätge.*)

black, or it may be yellowish or brownish. Horns may be of any size from that of a pin's head to that of the finger. The base is concave or flattened, and rises from the skin, which may be normal or inflamed. Horns are usually single, but may be multiple. They may occur upon any part of the body, but are common upon the face. Horns may arise from the protrusion and subsequent desiccation of the contents of an atheromatous cyst through a larger or smaller opening in the cyst-wall; or they may begin as warts. Horns have been observed growing from the scar of a burn. A case has been reported where a horn of considerable size grew from the foreskin of the penis. Though commonly occurring upon elderly people, they are also found in the young. They are painless when not injured, and grow slowly, dropping off at times when they have reached considerable size, and leaving behind a shallow ulcer from which the horn is again reproduced. They are rare among skin diseases, but 42 cases being reported in the 123,786 of the American statistics.

The treatment of cutaneous horn is simple. The growth is to be twisted or cut out, and the base cauterized with caustic potassa or chloride of zinc, to prevent its reproduction.

Crab Louse.—(See *Pediculosis pubis*.)

Crusta Lactea.—(See *Eczema*.)

Cubebs, Eruptions from.—(See *Dermatitis medicamentosa*.)

Cutis Anserina.—(See *Goose Skin*.)

Cyst.—(See *Sebaceous Cyst*.)

Cysticerci of the Skin (*sis-ti-ser'-sēv*).—Several cases have been reported in which these parasites have become encysted in or under the skin. The affection is characterized by the presence of a number of tumors, of pea- or hazel-nut size, rounded or oval in outline, smooth and firm. They are not usually painful on pressure, and having

attained a certain size they may remain unchanged for years, new tumors arising from time to time in some cases.

The tumors caused by the presence of cysticerci in the skin may be mistaken for *lipoma*, *carcinoma*, *sarcoma*, *molluscum epitheliale*, *sebaceous cyst*, or *syphilitic tumors*. Microscopic examination reveals the presence of the parasite. The treatment consists in opening the tumor and applying tincture of iodine.

Dandruff.—(See *Pityriasis capitis*.)

Demodex Folliculorum.—A minute worm-like parasite belonging to the acarii, not infrequently found in the sebaceous follicles, especially those of the nose. It gives rise to no symptoms whatever of disease, but is occasionally pictured in quack advertisements, to frighten the ignorant. The worm-like plugs of altered sebaceous secretion which can be expressed from greasy skins particularly on the face and nose, are occasionally mistaken for parasites and are popularly called “flesh-worms” or “grubs.” The demodex is usually found imbedded in these inspissated comedones. (See *Comedo*.)

Dermatalgia (*der-mat-al'-jia*).—Under the designation dermatalgia, or dermalgia, an affection, or rather, a condition of the skin is described in which pain is experienced without any appreciable lesion. It is analogous in this respect to pruritus, in which sensation is likewise perverted without any perceptible change in texture.

In some cases dermatalgia is a symptom of some affection of the nervous system, as locomotor ataxia.

Arnozan* has shown that dermatalgia is distinct from hyperæsthesia, but he maintains that it cannot exist without some anatomical lesion. This, however, would make the term cover more than it is intended from the present point of view.

* Dict. Encyclopædique.

In dermatalgia, as we conceive it, the pain is peculiar. It includes continuous sensations of burning, stinging, darting pain, varying, however, in degree at different times, and usually much aggravated by touch or pressure. Even the slightest pressure of the clothing may bring on agonizing pain.* Anæsthesia may exist at the same time. Occasionally sensations of cold are experienced, and sometimes a feeling of numbness or deadness. The skin remains absolutely normal in appearance.

Dermatalgia is rarely generalized. Usually only a small area of the skin is affected; it is usually seated upon the hairy portions of the surface, the scalp and the lower limbs. It is more frequent in the female sex.

Cases of intermittent dermatalgia have been reported, but usually the affection lasts for some days or weeks, and then disappears. Brocq cites a case of dermatalgia limited to the external surface of the left thigh in an old syphilitic. It had lasted some months, but was relieved by antisiphilitic treatment.

Dermatalgia may be symptomatic of some precedent injury or some systemic disorder as syphilis, diabetes, polyuria, possibly malaria, hysteria, anemia, etc. It has been supposed to be the result of exposure to cold, and has been called rheumatism of the skin; but this is purely hypothetical.

The diagnosis must be made between dermatalgia and the deeper-seated, painful affections resembling it, as ordinary neuralgia, muscular rheumatism, etc. It must be remembered that the painful sensations are very superficial in well-defined areas of the skin itself, and not deep seated, as in the other affections.

The treatment of dermatalgia must be general and directed to the patient's constitutional condition. The

* See also *Neuroma, Painful*, where similar symptoms are observed.

rheumatic or gouty condition, if present, must be combatted, anæmia, chlorosis, digestive and uterine disorders ; in fact, whatever condition is likely to arouse reflex nerve irritability must be inquired after and, if present, treated. The local treatment is not very successful, but, of course, all means must be tried. Galvanism, the application of a blister to the part, morphia, and other sedatives, may be applied. Tincture of aconite, pure, with caution, or diluted, seems likely to give relief. This should be applied on compresses, firmly bound to the part, for firm support by bandages seems itself to assuage the pain.

Dermatitis (*dermat-itis*).—Under this term those inflammations of the skin induced by local influences, as wounds, toxic agents, heat, and cold, are here to be considered. The various other affections to which the name dermatitis has been given, will be found under specific heads further on.

Traumatic dermatitis is that form of inflammation of the skin, which is produced by mechanical agencies, as bruises, abrasions, etc., which need not at present be considered further.

Dermatitis venenata includes the various eruptions produced by the local effect of toxic agents. Chief among these is the inflammation caused by contact with poisonous plants, of which the poison ivy and the poison oak are best known. The first of these plants, known to botanists as *rhus venenata*, is a climbing, ivy-like plant, which is usually seen about walls and fences, or running up trees to a considerable height, supporting itself by lateral rootlets. The leaves are ternate, and grow on long, semi-cylindrical petioles. Leaflets (three) ovate or rhomboidal, acute, smooth, and shining on both sides, the veins sometimes a little hairy beneath. The margin is sometimes entire, and sometimes variously toothed and lobed in the same plant. The flowers are small and greenish-white.

They grow in pannicles or compound racemes on the sides of the new shoots, and are chiefly axillary. The berries are roundish and of a pale green color, approaching to white. The poison ivy is apt to be mistaken for the Virginia creeper, especially in autumn, when the brilliancy of its foliage makes it fatally attractive to the unsophisticated collector of leaves. It should be remembered that the Virginia creeper has five leaves on the stalk, while the poison vine has but three. The leaves of the latter also vary greatly in form.

The poison oak, or *rhus toxicodendron*, is a decidedly rare plant, and is usually found growing in unfrequented swamps, where its fine smooth leaves give it the air of a tropical shrub or tree. The trunk is one to five inches in diameter, branching at the top, and covered with a pale grayish bark. The ends of the young shoots and petioles are usually of a fine red color. The leaves are pinnate, the leaflets one to thirteen in number. The flowers are small and green, in axillary pannicles. The fruit grows in the form of a bunch of dried greenish-white berries, sometimes marked with slight purplish veins, and becoming wrinkled when old. The poison oak is apt to be mistaken for elder or sumach. The leaves of the latter, however, have serrated edges, and the tips are pointed.

The poisonous qualities of the *rhus toxicodendron* and the *rhus venenata* are due to a volatile acid called toxicodendric acid.

The effect varies greatly with the individual. Some persons are so susceptible that they cannot pass to the windward of the vines, or be exposed to the smoke from their burning, without suffering severely, while others can handle them with impunity. The severity of the eruption may also vary from the production of a few vesicles to a very severe eruption, and even death is said to have been caused in two reported cases.

As regards the symptoms of this form of dermatitis, there is first a period of incubation, varying from a few hours to several days. In children fretfulness and slight fever may precede the outbreak of the eruption. The first local symptoms are burning, heat, and itching, usually observed on the face and hands, as these are the most exposed parts. The surface becomes reddened, with occasional livid spots, and the cellular tissue in the vicinity becomes œdematous. About this time the characteristic vesicles begin to appear, usually first of all between the fingers. The next locality involved, in males especially, is usually the genitals. From here the eruption may spread to other parts of the body.

When the eruption is at its height, the surfaces involved are of a lurid red color, more or less œdematous, occupied by patches of papules and vesicles, the latter often confluent, with frequent excoriations exuding a clear yellow fluid, which gums on linen, and dries into a soft crust. The eyes are often closed from swelling of the eyelids, while the nose, lips, and ears are swelled, and drip with serum. The genitals are often enormously tumefied, and in the most aggravated cases there may be such excessive general œdema that the patient may be rendered actually helpless. In the more marked cases there is sometimes a slight febrile reaction, with coated tongue and constipated bowels. General symptoms are absent, however, in mild cases. The subjective sensations are usually itching and burning in the affected parts. In severer cases this may be intensified to a burning, stinging heat, and the torture may be so great as to deprive the patient of sleep and require the administration of narcotics. The eruption remains at its height for several days, but by the end of a week the acute symptoms have usually subsided, though a few stray lesions sometimes continue to appear.

The diagnosis of rhus poisoning is usually made without

difficulty, because a history of exposure to the poison vine or oak may almost always be obtained. In addition, the localities attacked are characteristic. The vesicles are usually first found between the fingers, where the skin is thin, then on the dorsal surface of the fingers and hands, and last on the thickened skin of the palms. The eruption is more scattered than that of eczema, with which affection it is most liable to be confounded, and the vesicles are usually developed as such, springing often directly from the skin without going through the preliminary stage of papules, as is usually observed in eczema.

Dermatitis venenata is not, strictly speaking, contagious. In recent cases the poison can be conveyed from one person to another, or from one part to another, by simple contact of the surface. Thus, the penis may be handled, in micturition, immediately after handling the poison vine, and thus this locality is very apt to be attacked.* But, on the other hand, experiments in inoculation of the serous fluid from vesicles or bullæ have in every case resulted negatively.

Eczema is very apt to occur as an immediate sequel to dermatitis venenata, but the latter disease does not predispose to eruptions of any kind as a remote result of its influ-

* Dr. White cites a case where a servant boy, being insusceptible of poison by ivy, had been employed in pulling up all the vines of that plant found growing in the grounds about a country house. When his task was finished he was made to wash his hands thoroughly with hot water and soap, and afterward with vinegar. In the afternoon this boy took a child of six years, belonging to the family, to bathe in a pond. Having stripped the child he immersed him, holding him with his hands under the armpits, and afterward rubbed his back with his open palms.

After two or three days the child was taken ill, and grew rapidly worse. Deep ulcers made their appearance under the armpits, and the skin of the back exhibited in aggravated form the usual marks of poisoning by ivy. He died at the end of the third week of his sickness. Cantrell reports a similar case in which a parturient woman was poisoned by the attendant nurses.

ence upon the system. White thinks that there is no evidence of a continuance or renewal of the operation of the poison after its primary impression on the skin has exhausted itself, and therefore the accounts which we have of yearly recurring attacks of dermatitis venenata indicate renewed exposure, and not spontaneous periodical exacerbation of poisonous influence.

A multitude of remedies have been, and constantly continue to be, suggested for the relief of rhus poisoning, some of which are effectual, while others have appeared to prove successful merely because the affection, running a spontaneous course toward recovery, has gotten well while they have been in use.

In my experience the use of black wash, in the form of cloths kept wet with the wash and in constant contact with the skin, is one of the most useful remedies. White suggests that it should not be used over extensive surfaces for fear of absorption. He recommends the following :—

R.	Pulv. zinci ox.,	ʒiv	
	Acid. carbolic.,	ʒj	
	Aquæ calcis,	Oj.	M.

This, after being shaken, is sopped over the affected parts freely and repeatedly through the day and by night as well, so often as the patient is waked by the intense itching and burning which characterize the inflammation in its early stages. It may be applied over the whole surface of the body and for any length of time with safety, and is generally well borne at any stage of the disease.

Decoction of white oak bark is also useful.

The following, recommended by Hardaway, of St. Louis, has done me good service :—

R.	Zinci sulphat.,	ʒj	
	Aquæ,	Oj.	M.

STG.—Apply on cloths every hour through the day, and several times during the night.

A remedy which I have used with great satisfaction is the fluid extract of *grindelia robusta*:—

℞. Ext. *grindeliæ robustæ*, fluid., f 3 ij-iv
Aquaë, Oj. M.

This is to be applied to the affected parts on cloths, which are to be thoroughly wet with the solution and then allowed to dry almost completely upon the skin, removing them when nearly dry and renewing the application, but not keeping the cloths constantly sopping wet, as with other sedative and astringent lotions.

Astringent powders may also, at times, find appropriate place, as on the face, when the patient is obliged to go about, and cannot keep wet cloths, etc., applied. The following may be mentioned:—

℞. Pulvis zinci carb. præcip.,
Amyli oryzæ, āā ʒj. M.

Or this:—

℞. Magnesii carbonatis levis,
Pulveris lycopodii, āā ʒss. M.

At times none of these applications seem effectual, when the employment of some simple domestic remedy, as a solution of washing soda in water, gives relief. I am inclined to think that failure more frequently results from inadequate or improper application of remedies than of the want of virtue in the latter.

Most patients presenting themselves with rhus poisoning are children, on whom it is difficult to apply any remedy effectually. The parts affected are difficult to cover, and constant movements cause the best placed bandages to be quickly removed. If it were possible to place some fixed adhesive dressing, this would be of advantage, but where there is much secretion such applications will not remain long in contact with the skin. I have used a solution of tar, or oil of cade in collodion, or gutta percha one drachm to the ounce, on parts where the itching is severe, and

where the skin has not yet been broken. The advantage of this is that small scattered patches can be covered without the necessity of extensive dressings.

White recommends a solution of gelatin in glycerin and water :—

R.	Gelatin,	℥ iv	
	Glycerin,	f ℥ j	
	Aquæ destillat.,	ad f ℥ iv.	M.

This may be used when the skin is broken, and, by the addition of a drachm of boric acid, may be made antiseptic at the same time.

When washes have been used in the daytime, they may be replaced by ointments at night. These should usually have vaseline as a base.

The following may be suggested :—

R.	Acid. tannic.,	gr. xv	
	Petrolat.,	℥ j.	M.

Or salicylic acid may be employed in the same proportion used of the tannic acid.

When there is much itching :—

R.	Acid. carbolic.,	gr. x-xx	
	Hydrarg. chlor. mite,	gr. x	
	Pulv. amyli,	℥ j	
	Petrolat.,	℥ j.	M.

The calomel should be used with caution, or omitted when the surface to be covered is considerable.

Where constipation exists, it is well to give a purgative at the beginning of the treatment. No other internal treatment is required.

The prognosis of this form of dermatitis is, of course, favorable, although the occurrence of successive crops of eruption may delay the cure for some weeks.

Various other plants are mentioned by Dr. J. C. White, in his very complete monograph on "Dermatitis Venenata," as known or believed to exercise an irritant and poisonous action on the skin. Among these, which are very

numerous, the best known are the following: *Cashew nut*, *Indian turnip*, *skunk cabbage*, the *upas* of Java, cultivated at times in our gardens; *bitter orange*, *catalpa*, *arnica montana* (not the American arnicas), *flea-bane*, *burdock*, *euphorbia*, *manchineel* of Florida, *mucuna pruriens* or *cowhage*, *flax?* *bayberry* (employed in making cheap "Bay rum"), *poke*, *smartweed*, *wood anemone*, *clematis*, *larkspur*, *buttercup*, *ipecac*, *cinchona* and *quinine*, *Balm of Gilead*, *mezercon*, *thapsia*, *nettle*, etc.

Of inorganic substances which may give rise to dermatitis are *paraffin*, *petroleum*, *common or sea salt*, *bichromate of potassium* and *aniline dyes*. In addition, a number of drugs may produce the same condition. Some, if not all, of these will be found mentioned below under *Dermatitis medicamentosa*. Of the animal kingdom, mention may be made of the lower forms of marine life—*hydroa*, *medusæ*, *polyps*, etc.—of which the best known are the *Portuguese Man-of-war*, the *jelly fishes* generally, and *sea urchins*. The commoner animal parasites will be found mentioned under their various names, or that of the diseases they produce, as *bedbug*, *scabies*, *pediculosis*, etc. The scope of this work is not sufficiently extensive to treat of these subjects, but I have thought well to mention them as suggesting a possible origin for some obscure forms of irritation of the skin which the practitioner is liable to encounter. Reference may be made to the monographs of White, Piffard, and Morrow for fuller details.*

Advantage is sometimes taken by malingerers and hysterical persons of the known action of the agents mentioned above to produce artificial eruptions. (See *Feigned Eruptions*.)

* In the dermatitis produced by disinfecting lotions employed by surgeons, as corrosive sublimate and iodoform, a 4 per cent. solution of nitrate of silver, painted on, often gives relief.

Dermatitis Congelationis. "Chilblain."* The inflammations of the skin produced by cold resemble, in many respects, those produced by heat, only, unlike burns, their course is slow. In addition, a certain morbid predisposition on the part of the patient is a necessary condition of their occurrence. The occurrence of chilblains does not necessarily depend on the influence of extreme cold; indeed, the affection is commoner in hot than in cold countries, and may occur at a temperature not below 32° F. Anæmic and chlorotic persons are more apt to be the subjects of the affection.

The erythematous form of chilblain shows itself in the form of circumscribed patches, of a livid red color and somewhat tubercular character, the color disappearing under pressure of the finger. The lesions itch and burn painfully. They occur most commonly upon the fingers and toes, but may appear also on the ears, nose, or other parts of the face, or, indeed, on any part of the body which is exposed to cold. Their course is essentially chronic; usually they do not change in appearance, but sometimes become hard and infiltrated, while at other times, under the influence of pressure or rubbing, as of the shoe, or of scratching, a bleb or pustule forms. The pain is then considerably increased, especially when the bulla or pustule bursts and leaves an ulcer. These changes, however, frequently lead to the cure of the affection, which might otherwise have lingered on indefinitely.

The bullous form of chilblain is formed under the influence of a more intense degree of cold, and is characterized by the formation of watery or sero-sanguinolent blebs, the size of hazel-nuts or goose-eggs. If they are not punctured

* I am inclined to agree with Brocq in considering chilblain as an affection of larger scope than is implied by the term *Dermatitis congelationis*. Cold is one cause of chilblain, but only one. I have retained it in its present place, however, for the present.

they undergo no change for some time, but at last break, after having effected considerable destruction of tissue, the bones even of the feet and hands being in extreme cases occasionally laid bare and exfoliating.

The escharotic chilblain is a still more extreme degree of the same process, sloughs forming, which may be cast off without further effect, or which may poison the blood with fatal result.*

Lupus erythematosus may sometimes be mistaken for chilblain, and, in fact, occasionally follows it. For the diagnosis reference may be made to the general features described under its former head.

The treatment of chilblain is, first of all, in the way of prevention. A sufferer from this disease must not expect to be cured while continuing to expose himself to the influences which produced it. Warm and sufficient clothing, protection of the hands and feet, and in cases where the general system is below par, such medication and hygiene as will improve this condition; such are the points to which attention must first be paid. In mild acute chilblain, rest, in the horizontal position, frictions with cold water or snow, and astringent sedative lotions, as lead water, lotion of *grindelia robusta* (see *Dermatitis venenata*), or opiate washes, may be prescribed. In the more chronic forms of erythematous chilblain stimulant applications are called for. When unbroken the lesions may be painted with tincture of iodine, or better, with oil of peppermint, pure or mixed with one to six parts of glycerine. The following pigment is convenient of application:—

R.	Tinct. iodini,	℥j	
	Ætheris,	fʒiiss	
	Collodii,	fʒj.	M.

SIG.—Apply with a camel's-hair brush.

* Chilblain has been supposed to bear some relation to tuberculosis, and is undoubtedly related to Reynaud's Disease and to the "Glossy Skin" of Mitchell and other writers. (See *Trophoneuroses of the Skin.*)

When the lesions are broken, or in any case, the following forms an excellent application:—

R. Terebinth. Venetian, ℥ ij
 Ol. ricini, f ℥ iss
 Collodii, f ℥ viiss. M.

SIG.—Apply with a brush as often as required to shield the chilblain from the air.

The following ointment may also be employed:—

R. Plumbi acetat., ℥ iiss
 Ol. rapi (Colza), f ℥ j
 Vitel. ovi., j
 Cere flavæ, ℥ iss. M.

Lassar recommends:—

R. Acid. carbolic., gr. xvss
 Ung. diachyli,
 Lanolini, āā ℥ v
 Ol. amygdalæ, ℥ iiss
 Ol. lavandulæ, gtt. xx. M.

Liniment of aconite may be used, but with caution.

Carbolized cosmoline relieves the burning and itching.

The severer forms of dermatitis from cold belong rather to the province of the surgeon than the physician. When operative interference is not demanded, they are to be treated in a similar manner to burns of the like gravity.* The heat of summer sometimes produces eruptions of the skin.

Dermatitis Calorica. This subdivision includes the inflammatory symptoms produced by heat, in the form of burns. The treatment of such lesions ordinarily comes under the management of the surgeon, and need not therefore be referred to further.

Dermatitis Gangrenosa† is a rare affection which has chiefly come into notice during the past few years, through

* See *Eruptio. Æstivalis bullosa*, Sajous. (*Ann. Univ. Med. Sci.*, 1893, Vol. iv, A. 9.)

† See *Multiple Cutaneous Gangrene in Children*, due to Cachexia (*Philadelphia Medical Times*, 1881, p. 412.)

a number of reports of cases published in the medical journals. It may be idiopathic or symptomatic. The idiopathic form is apt to occur symmetrically. It usually begins in the form of small or large, circular, erythematous, reddish or purplish spots, which may be tender and painful, or without sensation; after undergoing a more or less variable course they become gangrenous and slough, the process terminating fatally or in recovery; the latter event taking place sometimes in the gravest cases. There is usually some constitutional disturbance, fever, malaise, debility, etc. Gangrenous patches may follow nerve lesions, or may occur, also, in connection with grave cerebral or spinal diseases, as in the form of acute bed-sore, or in connection with diabetes (see *Diabetes, Skin Diseases in*). These form the symptomatic form of gangrene. I have seen a case where a man who had recently suffered amputation of a leg, from a railroad accident, showed, within a week, lesions over the knuckles and on the right forearm, resembling at first a bullous erythema, and changing later to black sloughs, which were finally thrown off by ulceration.

In all cases of gangrene of the skin, and the like, care should be taken to exclude artificial and feigned diseases. (See *Trophoneuroses*.)

Dermatitis Exfoliativa.—(See *Pityriasis rubra*.)

Dermatitis Exfoliativa of Infants.—Under the designation of *exfoliative dermatitis of infants at the breast*, Ritter von Rittershain describes a disorder of a serious character which makes its appearance from the second to the fifth week of life, with the following symptoms: At first, dryness of the skin with slight desquamation, and redness of the lower part of the face, with fissures at the angles of the mouth. The mucous membrane of the latter becomes hyperæmic and the seat of large irregular erosions covered with a thin grayish layer. Meanwhile the child remains well nourished and shows no elevation of temperature.

Later, the redness extends over the whole body, and crusts form on the lower part of the face, under which the skin becomes deeply fissured. The epidermis over the whole body is thickened and lifted up from the cutis by a thin layer of fluid exudation. The epidermis is soon thrown off in large masses, leaving the exposed cutis of a dark red color, presenting an appearance like that of an extensive burn. The hands and feet are particularly affected, and here the epidermis peels off in great flakes. Several varieties of the affection in its early stages have been observed. Sometimes miliary vesicles are seen on the forehead, extending to the scalp. In other cases the eruption resembles an eczema; in a third class of cases it is like pemphigus. Desiccation takes place sometimes within twenty-four to thirty-six hours. In exceptional cases the skin continues dry throughout the whole course of the disease, becoming fissured and presenting a parchment-like dryness. In these cases the whole surface is not involved. All of these changes take place within a week. Later, slight desquamation occurs, often accompanied by eczema, furuncles, and abscesses, with at times extensive phlegmonous infiltration, gangrene, and death from intercurrent pneumonia, colliquative diarrhœa, etc. Fifty per cent. of the 274 cases observed by Ritter died. The existence of the disease as an independent affection has been denied, but Caspary has recently corroborated Ritter's statements.

Dermatitis Scarlatiniforme.—Rare cases of scarlatiniform and similar forms of dermatitis, involving the whole or portions of the surface, have been described by various writers. Some of these appear to be connected with septic infection, childbirth, etc. They are so rare and illy defined that I do not think it desirable in the present state of our knowledge to do more than record the possibility of their occurrence. (See *Exfoliative Dermatitis*.)

Dermatitis Herpetiformis (*Duhring's Disease*).^{*}—Under this designation the disease described by writers under the name of “*impetigo herpetiformis*” and “*herpes gestationis*” is to be understood, as well as numerous cases reported as “*pemphigus*,” “*herpes pruriginosus*,” “*hydroa*,” etc. The name *dermatitis herpetiformis*, given by Duhring, who has published a number of papers bearing upon the subject, seems to better describe this disease than any other name thus far chosen, and has been generally adopted.

Dermatitis herpetiformis may be defined as a chronic multiform skin affection, characterized by successive outbreaks in which the eruption may be at one time herpetiform and vesicular, at another pustular, while in other instances, or at other periods in the history of a given case, wheal-like lesions or bullæ may predominate. The lesions tend to assume a circinate arrangement, and severe and intolerable itching, with more or less constitutional disturbance, is a common accompaniment.

In severe cases prodromal symptoms are usually present for several days preceding the cutaneous outbreak; they consist of malaise, constipation, febrile disturbance, chilliness, heat, or alternate hot and cold sensations. Itching is also generally present for several days before any sign of efflorescence shows itself. Even in mild cases slight systemic disorder may precede or exist with the outbreak. This latter may be gradual or sudden in its advent and development. Not infrequently it is sudden, one or another manifestation breaking out over the greater part of the general surface, diffusely or in patches, in the course of a few days, accompanied by severe itching or burning.

A single variety, as, for example, the erythematous or the vesicular, may appear, or several forms of lesion may exist

^{*} An excellent description of this, and the most recent with which I am acquainted, is that by Brocq, *l. c.*

simultaneously, constituting what may very properly be designated the multiple variety. The tendency is, in almost every instance observed by Duhring, to multiformity, and my experience coincides with this. There is, moreover, in many cases a distinct disposition for one variety, sooner or later, to pass into some other variety; thus, for the vesicular or pustular to become bullous, and *vice versa*. This change of type may take place during the course of an attack, or on the occasion of a relapse, or, as is often the case, it may not show itself until months or years afterward. Not only multiformity of lesion, but irregularity in the course of development is, it may be repeated, the rule. Itching, burning, or pricking sensations almost always exist. When the eruption is profuse they are intense and cause the greatest suffering. They become more violent before and with each outbreak, abating in a measure only with the laceration or rupture of the lesions. The disease is rare, but of more frequent occurrence than was formerly supposed to be the case. Duhring's fifteen cases were adults, including both sexes in about equal proportions. I have met with a number of cases, including one in a boy of twelve. The disease process is in almost all instances chronic, and is characterized by more or less distinctly marked exacerbations or relapses, occurring at intervals of weeks or months. The disposition of the eruption to appear in successive crops, sometimes slight, at other times severe, is peculiar. Relapses are the rule, the disease in most cases extending over years, pursuing an obstinate, emphatically chronic course. All regions are liable to invasion, including both flexor and extensor surfaces, the face and scalp, elbows and knees, and palms and soles. Excoriations and pigmentation, diffuse and in localized areas, are in old cases always at hand in a marked degree. The pigmentation is usually of a mottled, dirty yellowish, or brownish hue, and is persistent. The diagnosis is at

times difficult, the affection being liable to be mistaken for *pemphigus*, *herpes*, *erythema multiforme*, and *eczema*. The following table will aid in the differential diagnosis :—

DIFFERENTIAL DIAGNOSIS

BETWEEN

DERMATITIS HERPETIFORMIS.

1. Lesions multiform but chiefly vesicular, pustular and bullous or urticaria-form, separate, combined or alternating in different attacks.

2. Lesions generally in groups, often taking on a circinate appearance.

3. Patches of eruption frequently spread by the formation of encircling groups of new vesicles or bullæ, while the central lesions dry up.

4. Intense itching and burning.

5. Bullæ may arise directly from the skin, or at times may be situated upon an urticaria-like base.

6. Individual lesions last a week or more.

7. Bullæ not usually larger than a split pea, unless several unite. Tend to have a stellate outline.

DERMATITIS HERPETIFORMIS.

1. Blebs, vesicles, and pustules may occur together.

2. Area involved extensive.

3. May occur on hands and wrists.

4. Lesions numerous.

PEMPHIGUS.

1. Lesions consist of blebs or bullæ.

2. Little tendency to group.

3. No tendency to spread peripherally.

4. Slight subjective symptoms.

5. Bullæ rise directly from surface of healthy skin.

6. Blebs disappear in two or three days.

7. Blebs usually larger and commonly rounded.

HERPES.

1. Lesions distinctly vesicular.

2. Usually limited in area.

3. Rare on extremities.

4. Lesions few in number.

DERMATITIS HERPETIFORMIS.

5. Runs a chronic course.
6. Itching intense.
7. Presence of large blebs due to coalescence of several smaller lesions.

DERMATITIS HERPETIFORMIS.

1. Lesion multiform, but principally vesicular or bullous.
2. May occur upon any part of the body.
3. Color of base of lesions a scarlet red.
4. Disease runs a chronic course.
5. Subjective sensation (itching) severe.
6. Erythematous lesions slightly raised, apt to have an indefinite outline.
7. Lesions pass slowly through several stages of development.
8. Lesions usually arranged asymmetrically.

DERMATITIS HERPETIFORMIS.

1. Lesions markedly herpetic in type, *i. e.*, consisting of discrete vesicles showing no tendency to break open and coalesce.
2. Lesions rise direct from the skin or from an urticariaform base.

HERPES.

5. Runs an acute course.
6. Burning, but only slight itching.
7. Blebs small, if present.

ERYTHEMA MULTIFORME.

1. Lesion multiform, but principally macular, papular, or tubercular.
2. Most frequent by far upon the extensor surface of the forearms and hands and legs and feet.
3. Color of lesions a highly characteristic, dusky, raspberry red.
4. Disease does not usually last over three or four weeks.
5. Subjective sensation rarely marked.
6. Erythematous lesions markedly raised and sharply defined.
7. Lesions, though multiple, do not change in character.
8. Lesions usually symmetrical in arrangement.

ECZEMA.

1. Vesicular lesions not herpetic, tend to run together and break open readily. Other forms of disease, *E. rubrum*, *E. squamosum*, etc., usually concomitant.
2. Vesicles usually have an inflammatory base, extending irregularly about them and forming a reddish patch.

DERMATITIS HERPETIFORMIS.

ECZEMA.

3. Intense itching, allayed only by opening the vesicles or bullæ, or more commonly rebellious to all treatment.
4. Extremely refractory to treatment.

3. Itching not usually affected by opening the vesicles, but allayed by the application of anti-pruritics.
4. Usually yields to appropriate treatment.

Treatment has, too often proved of little avail in retarding or checking the course of the disease, although much may be done to mitigate the severity of the symptoms. The general health, which is frequently impaired,* or which, in severe cases, may be broken down by suffering and sleeplessness, is to be improved by tonics, diet, etc., and especially change of air. Strychnia with quinine, and with or without the addition of arsenious acid, in doses of $\frac{1}{80}$ grain, has been found useful in this respect.

Brocq (*Sajous' Annual*, vol. iv, 1890, A. 6) employs ergotine and hydrobromate of quinia, four to eight grains of each daily.

Dubreuilh (*ib.*) employs 16 grains of ergot with $\frac{8}{10}$ grain extract of belladonna daily with success.

Soothing ointments, as the unguentum diachylon of Hebra, may be employed, or the following :—

R.	Bismuthi oxidi,	$\overline{5}$ j	
	Acidi oleici,	$\overline{3}$ j	
	Ceræ albæ,	$\overline{3}$ ijj	
	Vaselini,	$\overline{3}$ ix	
	Ol. rosæ,	mijj.	M.†

Washes are usually more grateful to the skin than ointments in this disease, and are required to soothe the often

* Among other causes of Dermatitis Herpetiformis, glycosuria has been observed in a number of cases by Wingfield (*Jour. Cut. and Ven. Dis.*, Nov., 1893).

† I have given the name of " McCall Anderson's ointment " to this formula, in recognition of the distinguished dermatologist who first suggested its use.

severe itching and irritation of the skin. The following is a convenient formula :—

R. Acid. carbolic., ℥ iij
Glycerinæ, f ℥ j
Aquæ, ad. Oj. M.

Elliott (*Sajous' Annual*, vol. iv, 1893, A—10) suggests ichthyol in a lotion of 25 to 50 grains to the ounce of water, or, better, in the following combination :—

R. Ammon. ichthyol., gr. xxx-℥ j
Olei amygdalæ dulcis,
Aqua calcis, āā f ℥ ss. M.

This is to be rubbed in several times daily, and allowed to remain on the surface ; or sheet-lint, saturated in it, is to be bandaged on the affected parts. Frequent starch baths, to which bi-carbonate of sodium may be added, in the proportion of four ounces to the ordinary full bath, sometimes proves useful.

Dubreuilh (*Sajous' Annual*, vol. iv, 1890, A—6) recommends lotions of chloroform water, followed by dusting with powdered talc and inunction with a calomel and belladonna ointment. In severe cases he uses narcotics internally, and when the eruption assumes a pemphigoid character a powder of talc with thymol may be used as a disinfectant.

Duhring (*Sajous' Annual*, vol. iv, 1892, A—16) thinks sulphur the most valuable of all local applications. He uses the strength of two drachms to the ounce in all forms except the erythematous when it proves irritating. It should be thoroughly rubbed in and not smeared on.

From the number of remedies recommended it may be seen that no treatment has as yet proved entirely satisfactory. We can but employ one after another until relief is gained.

The prognosis in dermatitis herpetiformis should be guarded. Some cases appear to get well, it may be after months or years, but others persist. Relapses are not

uncommon. The form observed in connection with gestation usually gets well more rapidly. That observed abroad by Kaposi, which he has called *Herpes Gestationis*, appears to be malignant, all or almost all of the cases ending fatally, which, it is believed, has very rarely been the result in any of the cases reported in this country. (See *Herpes Gestationis*.)

Dermatitis, Malignant Papillary, sometimes called "Paget's disease of the nipple," is a malignant disease of the nipple and adjacent structures, at first closely resembling eczema. The disease begins with roughness, redness, and scaling about the centre of the nipple, with occasional slight oozing or crusting, and, in some cases, the formation of a fissure. The process goes slowly on, presenting to all appearance the symptoms of eczema with intense itching, in many cases the nipple becoming retracted and finally melting away. When fully developed a considerable portion of the breast may be covered by the red, infiltrated, weeping patch, which is slightly sunken at the sharply defined edge below the level of the surrounding skin, and presents a peculiar livid crimson, different in tint from the bright red of eczema rubrum. Taken between the fingers, the infiltration of the skin does not extend as deeply as would be thought from the appearance of the disease. The points just given, together with the fact that the infiltration is firmer than that observed in eczema, and that the surface exudes a serous fluid without much discharge, crusting, vesiculation, etc., will serve to distinguish the disease from eczema of the nipple, with which it is very apt to be confounded. Any eczema of the nipple should, however, be viewed with suspicion, above all if chronic in character, tending to spread slowly and steadily, and with more or less progressive retraction of the nipple.

Daner and Wickham have suggested psorosperms as the cause of Paget's disease, but as the existence of such bodies

is denied, the whole matter of the pathology of this affection may be said to be undecided.

Malignant papillary dermatitis is actually or potentially a carcinoma, and should be treated as such. In the earlier stages destruction by scraping or cauterizing may be practiced with some hope of success, but once established the only treatment is complete excision of the part involved, or even ablation of the entire gland.

Dermatitis Medicamentosa.—Drug eruptions are those produced by the ingestion of substances ordinarily used as medicines. These must be taken up into the system to produce the effects here understood. The direct irritative effects caused by the application of drugs to the surface are described under the head of *Dermatitis venenata*.

Some drugs, as iodine and its salts, will produce eruptions in almost any individual if taken in considerable quantity or for a sufficient length of time; others, as quinine, only produce an effect in persons having a peculiar idiosyncrasy toward the drug. The following drugs have been known to produce eruptions upon the skin as a result of their ingestion: *Arsenic, antipyrine, anacardium, antimony tartrate, belladonna and atropia, bitter almonds, bromine, borax, benzoic acid, boric acid, cannabis indica, chloral, copaiba, cubebs, digitalis, duboisia, hyoscyamus, iodine, iodoform, mercury, opium, pilocarpine, phosphoric acid, quinine, salicylic acid, santonine, tar and its derivatives and congeners, turpentine, carbolic acid, creasote, rosin, and petroleum*.*

The eruptions produced by these drugs are generally limited to a few pretty well-defined groups, and bear a family resemblance to one another. Erythematous, scarlatiniform, and urticarial rashes are usually met with. Less frequently, pustular, bullar, purpuric, or nodular eruptions

* A large number of other drugs are enumerated by writers on the subject. See Morrow on Drug Eruptions.

are encountered. There is nothing about the appearance of these eruptions which is so characteristic that the drug causing it can be pointed out in any given case. We are able, however, in most instances, to designate an eruption as due to the effect of some drug, because, while resembling closely some other eruption in its lesions, the drug eruption is always different in some well-defined symptom. It may be too profuse, or it may be accompanied or unaccompanied by fever, contrary to the usual rule, or the lesions may occur in some unusual place and run a peculiar course. These points will be developed further in describing the eruptions produced by the individual drugs.

The eruptions due to *iodine* and *bromine* differ so much from the other drug eruptions that they are best considered separately. There is an erythematous eruption due to bromine, which may occur in any part of the body, but is usually confined to the lower extremities; it is diffuse, and at times painful. A maculo-papular eruption has been described as occurring on the face and neck, the skin having a congested violaceous hue, with a copious eruption of maculo-papules and pustules, with enlargement of the sebaceous ducts and the formation of sebaceous crusts. The skin is flushed, but does not itch. As there is some fever and constitutional disturbance, this eruption may be mistaken for the erythematous syphiloderm, but the sebaceous character of the lesions is characteristic.

Wigglesworth has described a bullous eruption due to bromine, and characterized by lesions which were somewhat acuminate and varied in size from that of a split pea to the end of the finger. In some instances the bullæ ruptured, leaving sometimes a simple fringe of torn epidermis, and sometimes an ulcerated surface. Some of the bullæ appeared to contain blood.

The pustular eruptions due to bromine are better known than any of the other varieties. In their simplest form,

resembling acne, they occur sooner or later in almost all persons subjected to a course of the bromides. Occasionally a furunculoid or anthracoid eruption is observed. Here the smaller lesions are pea-sized, prominent, convex, vesico-pustules, seated on a hard, slightly elevated base, and surrounded by a vividly red areola. The larger lesions are flattened elevations, covered by a moist, flaccid cuticle, or thick, light-brown crust, and surrounded by a dark-red areola. The crust or cuticle being removed, the surface beneath presents numerous pin-head-sized, yellowish-red protuberances. The secretion is found to be chiefly sebaceous in character. These confluent lesions may be from one-fourth of an inch to several inches in diameter. The peculiarity which chiefly distinguishes this form of bromide eruption from acne is that it may occur in any locality, often being found where acne never occurs, and neglecting entirely the favorite localities of that disease.

A bromine eruption is occasionally met with which resembles the eruption of erythema nodosum.

In the diagnosis of bromine eruptions the dusky rose or violaceous color of the lesions must be taken into account, and also the distribution of the lesions, the fœtor of the breath, and the presence of bromine in the urine must be considered. Of course, the history is of importance.

With regard to the amount of the drug necessary to produce these skin eruptions, it can only be said that it varies greatly. While usually it is requisite that bromine or its compounds should be taken in considerable doses, and for some length of time, yet cases are on record in which very small doses have quickly brought out a characteristic eruption.

Like the eruptions due to bromine, those due to iodine have, some of them, at least, been familiar for a long time. The eruptions from iodine may be erythematous, papular, vesicular, bulbar, pustular, or hemorrhagic. The erythe-

matous form shows itself in large disseminated patches in various parts of the body, sometimes forming a sort of iodic roseola. The forearms are usually attacked. If the use of the iodide is persisted in, the eruption may pass on to the papular form. The papular eruption is characterized by heat of the skin, with reddish patches, on which are situated numerous large papules elevated very slightly above the surrounding skin, sometimes disseminated over the surface generally. This form of eruption is not unlike urticaria, but has a brighter and less circumscribed coloration. It is rare. Vesicular eruptions resembling eczema are said to have been caused by the ingestion of iodine or its compounds, and several observers have reported a peculiar bullous eruption situated usually upon the head, neck, or upon the upper extremities; less frequently upon the lower extremities and trunk. The lesions begin as pin-point-sized vesicles, or as shot-like papules, at the apices of which vesiculation subsequently occurs. The lesions are pale yellowish-white and glistening. If the iodine be persisted in, and especially if given in large doses, the bullæ change to red and purple, and become filled with sero-pus and even ichor. In a few instances blood has been found in the bullæ at an early stage.

The pustular eruption due to the ingestion of iodine or its compounds is in almost every respect analogous to that produced by the bromides, only that the confluent form is extremely rare. It is peculiar in its subjective symptoms, itching at first, and later giving rise to severe throbbing pain. This symptom, together with the violaceous color of the lesions, and their cheesy, non-purulent contents, serves to distinguish the iodine eruption from syphilis or any other disease with which it is liable to be confounded.

A purpuric eruption due to the ingestion of iodine or its compounds is now and then met with. It may be brought on even by minute doses of the drug, the case of an infant

having been reported where a fatal result was caused by a single dose of two and a half grains. Usually, however, the eruption is not severe, and is found upon the legs. Now and then other hemorrhages may be caused simultaneously. It is usually produced at an early date from the first exhibition of the drug, but its appearance is occasionally delayed until the drug has been administered for some time. The purpuric eruption ceases when the iodine is stopped, but may be reproduced by even minute doses.

Both the iodine and bromine eruptions may often be prevented by the simultaneous administration of arsenic. As much as ten minims of Fowler's solution may be given in each dose when this is borne by the patient. Paget recommends the administration of aromatic spirits of ammonia with the same view.

The other drug eruptions, aside from those due to bromine and iodine, may be classed together, on the ground that they are almost always of an exanthematous character, resembling scarlatina, measles, roseola, urticaria, etc., and that idiosyncrasy bears a much more important part in their production than in the case of the drug eruptions described above.

Anacardium causes erythema, urticaria tuberosum, and eczemaform eruptions.

Antimony and *Potassium Tartrate* produces urticariaform, erythematous, and vesiculo-pustular eruptions.

Antipyrine produces an erythematous eruption in small patches slightly raised above the skin, often confluent into quite large patches, and followed by desquamation. The eruption lasts from three to five days, is symmetrical, and usually affects the extensor surfaces. It may be universal. It resembles scarlatina, roseola, and measles.

An urticarial eruption also may follow the administration of antipyrine, and, more rarely, herpetiform, vesicular, purpuric, and furuncular eruptions.

Arsenic may cause the following eruptions: Pigmentations, erythematous, and desquamative eruptions, urticaria-form and œdematous conditions of the skin and subcutaneous tissues, vesicular eruptions (*Herpes zoster*), bullous eruptions, papular eruptions, pustular and ulcerative eruptions, purpura, shedding of the hair and nails, keratoses. (See Rasch. *Dermatoses d'origine arsenicale*, *Ann. de Derm. et de Syph.*, 1893, p. 160, for a full review of the subject.)

Boric Acid and *Borax* may cause a more or less extensive erythematous eruption; rarely papules, bullæ, or eczemaform lesions.

Benzoic Acid and *Benzoate of Sodium* may produce erythema and desquamation or maculo-papules.

Very small doses are sometimes sufficient to bring out arsenical eruptions in persons having the peculiar idiosyncrasy. A case is reported in which a rubeola-like exanthem was produced by three drops of Fowler's solution taken daily for three days.

The eruption produced by the ingestion of *belladonna* or *atropia* is always of an erythematous or scarlatiniform character. It is said to be more common among children, and often appears after the smallest doses, coming out very soon after the drug has been taken, and disappearing a few hours later. It usually invades the face and neck, but may cover the entire surface. It is bright red in color and sharply defined, not presenting exactly the appearance either of erythema or of scarlatina. It is composed of large patches, disappearing under pressure, but reappearing immediately when this is withdrawn. This eruption may or may not be accompanied by burning or itching, and it is not followed by desquamation. The mucous membranes are apt to be involved at the same time.

The belladonna eruption is likely to be confounded with the rash of scarlatina. The previous history, however, the absence of lassitude, of chills, and usually of headache, as

well as of febrile reaction and strawberry tongue, the ephemeral character of the eruption, and the accompanying dilatation of the pupil, will suffice to settle the question.

The mechanism of the belladonna eruption seems more easily explained than that of some other medicinal eruptions. It is, to all appearance, a secondary vasomotor paralysis of a marked character.

The *chloral* eruption is usually of an erythematous type, scarlatiniform, or of a dusky rose color, almost purpuric at times. The lesions are apt to occur in patches, on the face, neck, front of the chest, about the larger joints, and on both surfaces of the hands and feet. It is apt to be accompanied by swelling, heat, and severe itching of the affected parts. It may last from half an hour to several hours, and may end twenty-four hours later in light desquamation; relapses, even after discontinuance of the medicine, have been reported. Stimulants tend to bring out the eruption. The erythematous eruption, like that of belladonna, appears to be due to vasomotor paralysis, as also are the palpitations and dyspnœa; which are not unusual concomitant symptoms.

Urticariaform and papular eruptions may also be produced by chloral, and vesicular lesions with œdema have been observed. In rare cases desquamation, with shedding of the nails and hair, has followed these symptoms.

Purpuric eruptions have been observed in a number of cases as the result of the ingestion of chloral, and some of these cases have been followed by general desquamation, while one has ended fatally.

The eruption produced by *copaiba* internally administered is usually a perfectly characteristic papular erythema or roseola, the appearance of which is familiar to most persons who have occasion to prescribe this drug. It appears by preference upon the hands, arms, knees, feet, and abdomen. Sometimes it appears suddenly and covers the

entire surface. The patches are usually rose-colored, irregularly rounded, not appreciably elevated, sometimes isolated, sometimes grouped in large patches. If the use of the drug be discontinued the eruption lasts but a few days, but if the administration of the copaiba be persevered in, the eruption may extend and take on other forms. Itching is generally present, sometimes to an intolerable degree. The eruption disappears without exfoliation. Miliary, vesicular, and urticariaform eruptions have been described. These forms of copaiba eruption may sometimes be mistaken for syphilitic erythema, but the onset of the latter is not so sudden; there is no itching, and the places of election—namely, in the case of the copaiba eruption, the upper and lower extremities, especially the backs of the hands, the knees, and around the malleoli and upon the breast, rarely over the whole body—are different. The aspect, color, and configuration of the patches are also different. Finally, the disagreeable odor of the skin in the copaiba eruption, owing to the large quantity eliminated by the various glands, is a diagnostic point of value. A case of “pemphigoid” eruption, probably of bullous urticariaform lesions, with anasarca, but without albuminuria, has been reported. (The urine passed during the use of copaiba furnishes a deposit with nitric acid which may be confounded with albumen.)

The eruption produced by *mercury* is almost invariably of an erythemaform or scarlatiniform character, although cases have been reported in which vesicles, bullæ, pustules, and phlegmonous lesions have been observed. The dose of mercury required to bring out the eruption in persons having an idiosyncrasy toward this drug is often quite small. Two grains (.14 ctgr.) of calomel in one case, and in another a single five-grain blue pill, sufficed to bring out a copious eruption. Englemann reports the case of a man who took in the course of an afternoon three doses of

calomel, each a little over two grains (.15 ctgr.). Two hours after the last dose had been taken the patient began to experience a feeling of general discomfort; the skin became dry and began to itch more and more, the eyes became sensitive to bright light, the mouth and nose dry, and the voice hoarse. The face became puffed up and red, and this red color soon spread over the entire body, accompanied by severe fever, thirst, and sleeplessness. When seen the next morning, the patient presented the appearance of a person suffering from severe erysipelas. The face was greatly swollen, particularly the eyelids, so that the latter could scarcely be opened; the skin was drawn, shining, and scarlet red, even in the scalp. The conjunctivæ were markedly injected, and the nasal mucous membrane of the lips and buccal cavity. The tongue was thickly coated, except the tip, which was of a deep purplish red. The red color of the skin appeared to extend over the entire body. The skin was very slightly infiltrated, excepting in the face; it was dry and very hot; temperature 104° F., pulse 120. There was no albumen in the urine. There were general symptoms of fever; the skin felt very hot and itchy, particularly on the palms and soles, ears and scalp. There was extreme general malaise. The eruption began to disappear in a day or two, and desquamation took place in large sheets. The general symptoms of malaise continued for a fortnight. It was very difficult to distinguish the eruption in this case from that of ordinary scarlatina. The history was, of course, of the greatest importance. It appeared that the patient had twice previously suffered in a similar manner after taking mercury. The first time he had taken it in pill. The second time he had been exposed in a room to the fumes of the toy known as "Pharaoh's serpents."

The eruption brought out by the ingestion of *opium* or *morphia* is usually of an erythemaform character, and often

resembles closely that of scarlet fever, or, in some cases, that of measles or of urticaria. It is apt to attack the flexor surfaces, and is accompanied by severe itching. Occasionally complete desquamation of the epidermis takes place over the palms and soles, the epidermis being removable in the form of complete casts of the hands and feet. It is said that the pharynx may be attacked by an erythematous inflammation.

In a case reported by Behrend, one-fourth grain (15 milligr.) of opium was given every hour until ten doses had been taken, or two and a half grains of the drug in all. Within a few hours the patient was seized with severe itching in the skin over the chest, and on the inner sides of the arms, wrists, hands, thighs, knees, and calves. The itching was so severe as to prevent sleep. It was accompanied by a diffuse scarlatiniform eruption, which was made up of minute pin-point efflorescences, not sharply defined but separate, though at first sight they seemed to be diffuse except over the feet. The tongue was coated, the pharynx normal. The eruption faded rapidly when the opium was suspended, but returned again on recommencing the medicine. Desquamation took place at the end of fourteen days, in large patches, particularly over the backs and palms of the hands and on the soles of the feet.

The *quinine* eruptions are among the most frequent of all drug eruptions depending on idiosyncrasy, and, next to those produced by bromine and iodine, have been most carefully studied. Morrow has written an excellent monograph on the subject, and also, more recently, a very complete work on drug eruptions generally, to which reference may be made with profit.

The prevailing type of quinine eruption is erythematous, closely resembling the rash of scarlatina or measles. It first shows itself over the face and neck, but soon becomes diffused over the whole surface of the body. In exceptional cases it may not become generalized. Sometimes on desquamation the epidermis of the hands and feet is

shed as a whole. Occasionally the quinine eruption may be papular in form, sometimes resembling erythema multiforme papulatum, or more frequently urticaria. In this class of cases there is more or less œdema, with distressing burning, tingling, and itching.

The quinine eruption of scarlatinous form may be distinguished from scarlatina by the absence of the scarlatina tongue and sore throat. The pulse is too slow for the initial stage of scarlet fever, and the redness appears suddenly and without premonitory symptoms. The presence of quinine may also be demonstrated in the urine by observing fluorescence (after the chloride of sodium has been precipitated by nitrate of silver).

A special tendency to dermatitis of the scrotum has been noted in some cases of quinine eruption, and, finally, a number of cases of purpura-like eruption from quinine have been reported.

As regards the other drugs mentioned, little need be said, excepting that there is a general resemblance between them as regards their usual effects upon the skin. In eruptions due to the ingestion of drugs, we have, in almost every case, the imitation of some other eruption, but in an exaggerated form; the eruption is excessive in some way or another, and usually comes on without any premonitory symptoms, such as usher in the eruptions of the exanthemata, for instance. These points should be kept in mind in making a diagnosis in doubtful cases, and the question should at once be put as to what medicine, if any, has been taken.

Idiosyncrasy is the only word which can be used to explain the cause of eruptions due to the ingestion of drugs, and it may be added that they act through the nervous system. Beyond this our certain knowledge does not extend.

The treatment of dermatitis medicamentosa must, of course, begin by the suppression of the drug. An excellent local application in many forms of this variety of dermatitis is a glycerite of tannic acid (1 to 3) applied on a

thick layer of gauze and covered with paraffin paper. After the rash has subsided, a 2 per cent. boric acid ointment should be applied on cloths for a few days.*

* Dr. Saville (*British Journal of Dermatology*, February, 1892) describes a peculiar epidemic form of dermatitis which can scarcely be classified under any of the varieties above described.

It is a contagious malady, in which the main lesion is a dermatitis, sometimes attended by the formation of vesicles, always resulting in desquamation of the cuticle: usually accompanied by a certain amount of constitutional disturbance, and running a more or less definite course of seven or eight weeks.

The skin lesions occur in three stages: (1) An erythemato papular rash, with considerable induration and thickening, with œdema in some localities. The color fades away toward the margin, which sometimes terminates with an abrupt raised edge. Occasionally the lesions in the first stage resemble those of erythema nodosum, or E. papulosum. In a few cases the lesions were at first flat papules, which grew and spread like ringworm, with a circular ring of congestion enclosing a depressed area covered with minute vesicles. Vesiculation begins in the moist type of cases on the second or third day.

(2) The second stage, that of exudation or desquamation, lasts from three to eight weeks. The lesions become confluent, and present the appearance of a crimson surface of thickened and indurated skin, continually shedding its cuticle, in scales or flakes of various size, mingled sometimes with dried exudation. In one type of the disease, the moist, the affection at this stage resembles acute eczema. In the dry type it resembles pityriasis nita.

The skin continues in this condition, with recurring exfoliation, for days or weeks.

(3) In the third stage, that of subsidence, the inflammation gradually subsides, leaving the skin still thickened and indurated, but with a polished brown appearance. In many cases the new skin is raw and parchment-like, sometimes cracked here and there, like ichthyosis. A purpuric condition is sometimes observed beneath the outer elements of the eruption. The arms and forearms are usually first attacked, and next the face and scalp. The nails and hair are affected, extensive alopecia sometimes following.

Considerable constitutional disturbance occurs in connection with the disease, with anorexia, asthenia, thirst, and weak, slow pulse. The temperature is usually normal or subnormal.

The subjective symptoms consist of severe itching, irritation, and a feeling of burning pain. The average course of the disease is between seven and eight weeks. Relapses are common. A fatal result sometimes occurs in the old and debilitated.

The affection, as observed by Dr. Saville, occurred in an English work-house, but other observers have reported similar cases in private practice.

A diplococcus has been found constantly in the skin, the exudation, and

Dermatitis Papillaris Capillitii.—(See *Acne keloid.*)

Dermatolysis (*Dermatol'ysis*).—Dermatolysis is a rare



FIG. 12.—DERMATOLYSIS. (After Marcacci.)

anomaly of the skin, consisting in a more or less circumscribed hypertrophy of the cutaneous and subcutaneous

the blood of patients, and the disease has been communicated by this organism to animals.

Dr. A. W. Finch Noyes (*Australian Medical Journal*, June 15, 1892) reports a similar form of disease.

structures, characterized by softness and looseness of the skin, and a tendency to hang in folds. It is a rare and very striking affection, and may occur over various parts of the body, sometimes developing to an enormous size.



FIG. 13.—DERMATOLYSIS. (*After Marcacci.*)

Herr Haag, the “Elastic Skin Man,” who exhibited himself in various parts of the country some years ago, presents a striking instance of an anomaly closely allied to dermatolysis. Here, however, a remarkable looseness and elas-

ticity of the connective tissue is the chief characteristic. The affection is closely allied to elephantiasis. Microscopic examination of such cases shows the derma to be transformed into a myxomatous mass deprived of the fibrous fasciæ which in the normal skin limit the excessive elongation of the elastic fibres. The treatment of the circumscribed form of the disease is removal by the knife, or galvano-cautery when this is practicable.

Dermato-Neurosis.—(*See Neurosis of the Skin.*)

Dermatosyphilis.—(*See Syphiloderma, or syphilis of the skin.*)

Desquamation is the exfoliation or separation of the epidermis in the form of scales of a greater or less size. In the normal condition the epidermis is continually being rubbed off, washed away, or shed spontaneously. The dried and horny cells thus removed are constantly being renewed from beneath, the source of the epidermic growth being the rete Malpighii. As each cell grows and develops, the chemical and physical qualities of its constituents become changed and the cell loses vitality, its nucleus disappears, it becomes dry and lifeless, and is gradually cast off as effete. Under ordinary circumstances this normal desquamation takes place imperceptibly, in the form of fine, powdery scales.

In certain pathological conditions of the skin, and in certain grave constitutional disorders, *e. g.*, scarlet fever, recurrent exfoliative dermatitis, etc., general desquamation may take place to a marked degree in large lamellæ, the epidermis being thrown off the hands and feet in glove-like casts, occasionally even including the nails. Also in certain abnormal congenital states of the skin, as ichthyosis, which should be described rather as a deformity than a disease occurring in connection with general constitutional disturbance, excessive desquamation may take place in the form of bran-like scales.

Certain diseases of the skin, as psoriasis, are characterized by the profuse production of epidermic scales over circumscribed areas, and this symptom constitutes the clinical feature of the disease. In other skin affections, as, for instance, some forms of eczema, desquamation is the final stage in a series of pathological phenomena involving the cutaneous envelope.

In the scaly diseases, properly so-called, epidermic exfoliation goes on for an indefinite period, during the whole duration of the disease, in fact; while in affections where desquamation is a secondary phenomenon, but one exfoliation takes place, healthy skin forming underneath as the desquamative lamella is in process of separation, as after the blisters of a burn.

Desquamation of Tongue.—(See *Tongue*.)

Diabetes—Skin Diseases in Connection with.—A variety of skin affections may be met with in connection with diabetes, and more or less dependent upon the condition of the system characteristic of this disease, or upon direct irritation from the saccharine urine. These are as follows: 1. *Anidrosis* or *asteatosis*, a peculiar dry, parched condition of the integument dependent upon the partial failure of the sweat or oil glands to secrete; 2. *Pruritus cutaneus*; 3. *Chronic papular urticaria*; 4. *Acne cachecticorum*; 5. *Roscola* and *Erythema*; 6. *Eczema*; 7. *Paronychia*; 8. *Furunculus* and *Anthrax*; 9. *Gangrene*; 10. *Anthoma* and of late *Dermatitis herpetiformis*.

Most of these are rare. Diabetic eczema is the most frequent and best known. It has two noteworthy characteristics,—persistence and tendency to relapse. The reason of this lies simply in the difficulty of removing the cause. The cause of these troubles lies in the growth of a parasite or parasites, which is greatly favored by the presence of sugar. When diabetic eczema occurs in the acute form

in women, it is usually confined to the vulva and immediate neighborhood. When, for any reason, the disease persists and takes on the chronic form, the mons veneris, lower portion of the abdomen, hips, and groins may be involved. The symptoms are those of ordinary eczema vulvæ, only that the tissues are apt to be more thickly infiltrated.

The treatment of this form of diabetic eczema must consist, in the first place, in removal of the glycosuria. Diet and the usual remedies may be employed to this end. The customary local treatment (see *Eczema*) may also be employed. The following case will illustrate the plan of treatment I have found beneficial.

A woman, fifty years of age, who had had glycosuria of a moderate type for five years, suffered from eczema, of the moist, red type, affecting the buttocks about the anus and the groins, with dry erythematous eczema about the genitals. The eruption itched and burned excessively, the patient was highly nervous and lost much sleep.

The urine voided ranged from 40 to 50 oz., of 1035° to 1040° specific gravity. Examination showed it to contain about 1200 to 1600 grains of sugar *per diem*.

The patient was placed upon a strict diet. The bowels were regulated by compound licorice powder, and she was ordered a pill containing half a grain of codeine, afterward increased gradually to a grain and a half, to be taken thrice daily. Bromide of potassium was used as a sedative at night. Locally, the treatment consisted of the following:—

R.	Pulv. bismuthi oxidi,	ʒj	
	Acidi oleici,	ʒj	
	Ceræ albæ,	ʒiij	
	Vasellini,	ʒj-ʒj	
	Olei rosæ,	ʒiij.	M.

Cloths spread with this ointment were placed upon all

affected parts of the skin proper, and were changed twice daily. About the mucous membrane of the genitalia the following wash and injection was employed :—

R.	Sodii sulphitis,	℥iv	
	Acid carbolic,	f℥ss	
	Glycerinæ,	f℥j	
	Aquæ, ad	℥iv.	M.

The mucous membranes covering the clitoris and nymphæ, which were the seat of agonizing pruritus, were painted several times daily with a ten per cent. solution of muriate of cocaine. The parts were kept scrupulously clean and free from discharges, and, alternately with the injection, occasional vaginal douches with hot water were employed.

Under the employment of the codeine the quantity of sugar excreted, which had reached 1650 grains *per diem*, diminished gradually to 572 grains per diem, while the eczema, which had grown steadily worse under local treatment only, improved at the same time, and finally disappeared. While subsequent neglect and errors of diet caused an increase in the amount of sugar from time to time, the eczema and pruritus did not return, save to a very slight degree, and yielded promptly to treatment.

In addition to the local applications mentioned above, sulphurous acid about the genitalia (cautiously applied at first) and powders containing oxide of zinc starch and salicylic acid applied over the skin elsewhere, are likely to be of use. Saturated solutions of boric acid or corrosive sublimate 1–2000 should be frequently employed, and anti-septic cotton should be kept within the labia to separate the surfaces.

The following formula is one I have used. Sometimes it seems too astringent, when it may be diluted with plain starch :—

R.	Pulv. acid salicylic,	gr. x-xx	
	Pulv. lycopodii,		
	Pulv. zinci oxidi,	āā	℥j. M.

Of course, this cannot be used in the moist parts, as it would almost certainly cake and become very annoying. I should mention as a valuable adjuvant in many cases of diabetic eczema in the female the use of hot baths, simple or medicated with carbonate of sodium and starch. (See *Baths*.)

In men *erythema* and *eczema* are the commonest skin affections seen in connection with diabetes. *Erythematous balanitis* is usually confined to the immediate neighborhood of the meatus, which is seen framed in an oval erythema, glassy, smooth, and turgid. *Herpetic balanitis* is characterized by the appearance of numbers of pin-head-sized excoriations on a red hyperæmic base, coalescing to form round or irregularly oval outlines, but without any perceptible initial vesicle, as herpes.

More common than either erythematous or herpetic balanitis, is *eczematous balanitis*, which is characterized by various appearances at different times, but is usually dry and desquamating, and its gray or white tint contrasts with the red ground of the glans. Here and there the surface is fissured and bleeding or crusted. Often besides the eczema a whitish scurf is to be met, which, under the microscope, is seen to be a vegetable parasite, resembling a saccharomycete (Fournier). The prepuce, like the glans, may be involved subsequently. When severe, the lesions of eczema rimosum are to be observed characterized by a circle of linear chaps, arranged around the preputial ring like the spokes of a wheel.

Diabetic paraphimosis may be the result of the progressive thickening and infiltration of the prepuce, and sometimes præputial lymphangitis of chronic type causes the formation of nodules, which resemble vegetations, chancre, etc. Of course, these extreme forms are very rare. I have never seen any cases.

The treatment of this form of eczema is in part preven-

tive. There is no doubt but that the contact of the urine is one of the causes of irritation. Therefore, alkaline lotions, with dusting powders of oxide of zinc, bismuth, talc, boric acid, etc., may be employed. When there is phimosis, local baths of starch, together with frequently-repeated præputial injections, first with pure water, and then with medicated solutions of carbonate of sodium or borax. If there is suppuration, nitrate of silver solutions, five to ten grains to the ounce, may be employed. The opposed surface of glans and prepuce should be kept separate by pledgets of absorbent cotton. Circumcision, Fournier says, should never be practiced unless the urinary sugar has completely disappeared.

The other forms of skin eruption met with in diabetes have, so far as known, no peculiar characteristics to distinguish them from the same lesions due to other causes. Gangrene is one of the less frequent affections observed. It may be consecutive to some previous lesion of the skin, as furuncle, anthrax, or phlegmon, or it may be primary in origin. It may resemble senile gangrene or the severe forms of Renaud's disease, or it may occur in diffuse, small patches. Kaposi has described a bullo-serpiginous form of diabetic gangrene, beginning in blebs, which ulcerate and then heal up on one side while progressing on the other.*

In addition to the general treatment, the lesions should be cleansed, all discharge and detritus being removed, and then antiseptic applications, as saturated solution of boric acid or corrosive sublimate 1 to 2000, should be made. Subsequently the sores may be dressed with iodoform, aristol, or other antiseptic powders or ointments.

Dischromatosis.—(See *Vitiligo*.)

Dissection Tubercle (*Verruca necrogenica*).†—The re-

* This must resemble somewhat the cases of *Dermatitis herpetiformis* in connection with diabetes, to which allusion has been made under the former disease.

† See also *Tuberculosis of the Skin*.

sults of inoculation from dead bodies may be local, confined to the point of inoculation, or they may be general, producing severe constitutional disturbance. Usually the disease begins by the formation of a small vesicle or pustule on a hard, inflammatory base, or of a patch of reddish or violaceous induration, occurring at some point of inoculation, as an abrasion, etc. There may be, also, burning, itching, with pain usually extending up the arm to the axilla, and lymphangitis, with constitutional symptoms. The wound, as soon as detected, should be thoroughly washed in corrosive sublimate solution and soaked in a solution of chloride of zinc, or burned with this caustic, or, perhaps better, with lactic acid.

In other cases the disease is strictly local, being circumscribed, indurated, and painful. The epidermis becomes thick and fissured, the sore secreting a thick or thin fluid, resulting in a crust. In other cases the disease begins in a papule or tubercle, which may assume a warty character. To this the name of *verruca necrogenica*, or "dissection tubercle," has been given.

The treatment is somewhat similar to that of lupus. The wart should be softened by poulticing or by the use of salicylic plaster or solution of caustic potash, and then cauterized with lactic acid or a ten per cent. solution of corrosive sublimate in alcohol. Iodoform powder may be applied in the intervals, or an ointment containing corrosive sublimate. The treatment must be persisted in for considerable time.

Drug Eruptions.—(See *Dermatitis medicamentosa*.)

Duhring's Disease.—(See *Dermatitis Herpetiformis*.)

Dysidrosis (*dis-idro'-sis*) is an affection of the skin characterized essentially by the retention in the cutaneous follicles of sweat rapidly and freely secreted. The follicles are much distended, and congestion may follow with the formation of bullæ, maceration of the epidermis, and sometimes more or less dermatitis. (Tilbury Fox.)

In its slightest form the eruption is confined to the hands, occurring in the interdigits, over the palm, and along the sides of the fingers and on the palmar surface—some or all of these parts. The eruption may occur in summer or in winter, affecting usually persons who perspire freely. Patients complain of feeling weak and depressed. The eruption is made up at first of minute vesicles imbedded in the skin, which do not readily burst, and when fully developed resemble boiled sago grains. They are best seen on the palmar surface of the tips of the fingers, but in severe cases they may occur more or less over the whole palm of the hand as well as on the fingers. Itching and burning are always present. As the disease progresses the vesicles become more distended and raised, eventually yellow in color, running together and forming an aggregated mass of small bullæ which may develop into a considerable size. The hand is then very stiff and painful. If the vesicles are pricked, a clear fluid, at first alkaline and later acid, runs out. If left undisturbed the vesicles and bullæ dry up and the cuticle peels off, leaving a non-discharging, reddened, exposed derma. But the cuticle, especially about the roots of the fingers on the palmar aspect, may become sodden and like wet chamois leather. In slighter cases the disease may not run on to the development of bullæ.

Dysidrosis is most apt to be mistaken for eczema, but it is not inflammatory, as eczema is, and is unaccompanied by sero-purulent discharge, crusts, etc. The vesicles are not produced by the uplifting of the cuticle by sero-purulent fluid, but by the distention of the follicles by retained sweat. In rare cases, however, eczema may follow the disease.

Treatment in the severer forms of the disease should be both general and local. Dyspepsia and anæmia are not infrequent accompaniments of the disease. The kidneys should be made to act freely by means of diuretics. Aperients should also be used, and, in gouty or acid conditions,

alkalies. Later, quinine, arsenic, and iron are useful. Locally, dilute lead-water and soothing ointments should be kept applied, and if the sweat-glands generally are involved, bran and starch baths may be used.

The disease, or a similar one, has also been described under the name "Pompholyx."

Ecchymosis.—(See *Purpura*.)

Ecthyma* (*ek-thū-ma*).—Ecthyma is an inoculable and autoinoculable disease of the skin, characterized by the formation of one or more rounded pustules resting upon an inflamed base, and having a tendency to spread excentrically by sub-epidermic inoculation of the neighboring parts, while a brownish crust forms in the centre.

Vidal and Leloir distinguish two chief varieties of ecthyma: 1. *Ecthyma vulgare*, or *simplex*, accompanied by superficial ulceration; 2. *Ecthyma infantile*, or *cachecticorum*, accompanied by deep ulceration.

The pustule of ecthyma appears a few hours after inoculation (Brocq) in the form of a red point. At the end of the second day a minute papule or pustule appears in the centre of the red lesion. By the end of the third day the lesion has become acuminate in the centre, and by the fourth day the ecthymatous pustule is fully developed in the form of a yellowish-white pustule the size of a large

* The existence of ecthyma as an affection *sui generis* has been denied by German authorities, following Hebra, who considered the ecthymatous pustules as part of an eczema, a symptom and not a disease. It is therefore described meagrely or not at all in German works on skin diseases. In America, however, where the "American Statistics" show its occurrence, 726 times in a total of 123,746 cases, a proportion of .587 per cent., and in other countries, observation has shown that ecthyma possesses certain peculiarities which distinguish it from other skin affections, and it is considered a separate disease. Of course, modern views of both diseases solve the question by attributing both pustular eczema and ecthyma to an invasion of the staphylococcus pyogenes, but the clinical appearances afford a ground for treating them as different from a practical point of view.

pin-head or small pea, surrounded by a red areola, at the edge of which the derma is somewhat infiltrated. By the fifth to the eighth day the pustule has increased considerably in size and has become flattened. By the ninth to the eleventh day a central crust has formed, around which is a whitish circle formed by the epidermis, which has been elevated by pus. Beyond this is the red areola.

At this point the lesion may cease to extend and may begin to heal, disappearing by the end of the fifteenth to the twentieth day, and leaving behind only a superficial, more or less pigmented cicatrix of a reddish-brown color, which tends gradually to disappear.

Sometimes ulceration takes place under the crust. Occasionally the lesion of ecthyma extends more and more until it reaches an extraordinary size; the crust becomes thick, and gangrene may supervene. In broken-down subjects the affection may become grave. Such forms of ecthyma are not infrequently observed in our almshouses and prisons.

Ecthyma usually attacks the lower limbs, although the shoulders and other parts may be attacked. It sometimes gives rise to lymphangitis and phlebitis.

The subjective symptoms consist of slight itching or burning. Occasionally general symptoms of feverishness, etc., are observed.

Ecthyma infantile fulminans is a rare affection observed among young infants, characterized by the appearance of small red spots, papulo-pustules, or pemphigoid bullæ, beneath which ovalish, phagædenic ulcers, with deep-cut edges, surrounded by a red areola and outside of this a blue hæmorrhagic zone and covered with a grayish exudation, appear. These may grow down even to the subcutaneous cellular tissue. More rarely the lesions may remain a long time stationary, and then at length gradually fill up and heal over, leaving an indelible cicatrix.

This form of ecthyma is usually situated upon the legs, thighs, buttocks, and abdomen. Sometimes symptoms resembling those of typhoid or cerebro-spinal meningitis accompany or precede the outbreak. The prognosis is grave.

In addition to the bacilli *staphylococcus pyogenes aureus* and *albus* and a *streptococcus*, Ehlers has recently observed the *bacillus pyocyaneus*.

Ecthyma simplex may be confounded with *indurated chancre*, but in the latter the skin is more deeply infiltrated, the ulceration is deeper, and there is no border of inoculation. Moreover, the grouping and localization of the lesions are quite different.

Furuncle differs from ecthyma by its more vivid red color, by the deeper infiltration of the tissues, and by the more decidedly acuminate shape of the pustule.

The diagnosis between ecthyma, on the one hand, and *eczema pustulosum*, *impetigo*, *impetigo contagiosa*, *dermatitis herpetiformis*, and the *large flat pustular syphiloderm* is given in the table annexed.

Ecthyma is inoculable and autoinoculable, that is to say, the patient may convey the disease from one part of the skin to another by scratching or by other means, and thus transmitting the virus, the effect being shown in the development of new typical lesions in such parts. In the same manner the disease may be conveyed to other persons by handling bandages, dressing the sores, or in the contacts of home life.

It is this characteristic of inoculability which is the prime factor in the causation of ecthyma, although various predisposing causes exist. Debility, either from alcoholic or other excesses, from cachexia or from old age, is usually at the bottom of the affection. Syphilis, nephritis, diabetes, and severe acute diseases as variola and typhoid fever, may act as disposing causes.

DIFFERENTIAL DIAGNOSIS BETWEEN

ECTHYMA.	ECZEMA PUSTULOSUM.	IMPETIGO.	IMPETIGO CONTAGIOSA.	DERMATITIS HERPETIFORMIS (<i>Pustular Form</i>).	LARGE, FLAT, PUSTULAR SYPHILODERM.
<p>Legs, shoulders, and back are the commonest seats of the eruption.</p> <p>Pustules well developed; single or numerous; discrete; yellowish or yellowish-brown.</p>	<p>May occur in any part of the body.</p> <p>Pustules usually several grouped together, or numerous and running together.</p>	<p>Face, hands, and fingers, feet and toes, and lower extremities.</p> <p>Two to three to a dozen or more distinct pustules; discrete; yellowish or whitish.</p>	<p>Usually face and hands, but arms and scalp may be affected, or elsewhere; mucous membrane of mouth and conjunctiva sometimes affected.</p> <p>Small, isolated, flat, or raised vesicles, which become vesico-pustular; three or four to a dozen may run together and form a patch.</p>	<p>May occur on any part of the body.</p> <p>Yellowish pustules arranged in groups or an annular form; tend to run together. As they dry new groups of lesions form on periphery.</p>	<p>May occur anywhere, but usually on the back, shoulders, and extremities.</p> <p>Usually numerous lesions.</p>
<p>Lesions flat, broad, and seldom fully distended.</p> <p>Size, when fully developed, from small to large finger nail; indurated base; hard, red, tender areola.</p>	<p>Lesions of various sizes and shapes; commonly distended.</p> <p>Usually pin-head to pea size; no marked areola; no induration of base, but thickening of skin in seat of eruption.</p>	<p>Rounded, prominent lesions; thick walls; elevation striking; semi-globular in shape; tensely distended.</p> <p>Split-pea to finger-nail sized; base not infiltrated usually; red areola at first, which subsides later.</p>	<p>Small, isolated flat vesicles, becoming vesico-pustular in a day or two; flat; elevated; yellowish.</p> <p>At first small, rapidly increasing to blebs, at times; slight areola at first, which disappears on maturation.</p>	<p>At other times and in same individual vesicles and blebs.</p> <p>Various sized lesions.</p>	<p>Flat and rapidly crustifying.</p> <p>Large finger-nail sized, on a deep red base.</p>
<p>Dry into flat, brownish crusts, which, when lifted, show an excoriation or, more rarely, an ulcer.</p>	<p>Dry into irregular masses of crusts, formed by coalition of various lesions; no marked ex-cori-ation when crusts are removed.</p>	<p>When mature, contents become altered, sometimes bloody; dry into crust or are absorbed; if broken, thin, sero-purulent fluid exudes; crust drops off, leaving skin nearly normal.</p> <p>As a rule, no itching or burning.</p> <p>Runs an acute course, lasting several weeks.</p>	<p>Dry in a few days to flat straw-yellow crusts; slightly adherent; excoriations beneath, with thin puriform fluid.</p>	<p>Dry with yellowish, greenish, or brownish crusts; at one time or another a great variety of lesions.</p>	<p>Seldom remain pustules, but rapidly dry into heaped up, oyster-shell-like crusts, on an ulcerated base.</p>
<p>Heat, itching, and a certain amount of pain. Course of individual lesions about a fortnight; comes in successive crops.</p> <p>Outcome of want and misery, alcoholism, etc.</p>	<p>Little or no itching. Course indefinite and chronic.</p> <p>Usually due to impaired nutrition; not necessarily connected with misery.</p> <p>Children and adults.</p>	<p>Few or no subjective symptoms. Course usually definite at times.</p> <p>Course usually definite at times.</p> <p>Contagious and auto-inoculable; want of cleanliness favors its occurrence.</p> <p>Almost exclusively children.</p>	<p>Violent itching and constitutional disturbance. Relapses constant over years.</p>	<p>No itching. Course much influenced by treatment.</p>	<p>History of syphilitic contagion or other lesions.</p> <p>Adults chiefly.</p>

In infants improper or insufficient diet and gastro-intestinal troubles and scrofula are predominant causes.

The general treatment of ecthyma consists in improving the health of the patient by proper hygiene and diet, and by the employment of tonics.

The internal treatment should include rest, fresh air, bathing, cleanliness, with such nourishing food as milk, eggs, strong soups, etc. In a few cases the administration of alcohol and malt liquors is desirable, but in the majority of cases these should not be prescribed. In old persons tonics and remedies which will stimulate the action of the kidneys may be employed. The following formula, analogous to the well-known Basham's mixture, is useful:—

R.	Liq. ammonizæ acetat.,	f℥ iiss	
	Acid acetic. dil.,	℥ iv	
	Tinct. ferri chlor.,	f℥ ij	
	Curaçoa,	f℥ iij	
	Aquæ,	℥ ss.	M.

SIG.—A tablespoonful in water three times a day between meals.

In younger persons we may prescribe a brisk purge with blue pill and colocynth, followed by an aperient tonic, as the mist. ferri acid. (see under *Eczema*).

In broken-down cases pure tonics, as quinine, iron, etc., may follow these or be used in connection with them.

The external treatment of ecthyma is essentially antiseptic and parasiticide. Since ecthyma is probably due to some parasite, the first thing to do is to suppress this factor, and next to prevent the propagation of the disease by scratching and auto-inoculation. The crusts, if numerous, are to be removed by a bath, preferably containing the sulphuret of potassium or by enveloping the parts in a rubber cloth or by the use of a starch poultice containing boric acid (see *Eczema*). The parts are then disinfected by sublimate soap, or by means of carbolyzed lotions or a 1 to 1000 solution of bichloride of mercury. The lesions are

then to be dressed with an ointment of boric acid one drachm or of fifteen grains of calomel to the ounce of oxide of zinc ointment. Ointments of aristol, dermatol, iodoform, or some similar parasiticide may also be employed as occasion demands.

The prognosis of ecthyma is favorable; a few weeks generally suffice to effect a cure if the patient can follow out the treatment carefully.

Eczema (*eks'-ema*).—Eczema is by far the most common of all diseases of the skin encountered in this country. The American statistics show that out of 123,746 cases of skin diseases, occurring in all parts of the United States and Canada, no fewer than 37,661, or nearly thirty and a half per cent., were cases of eczema. When we add to this the fact that most cases of eczema are either disfiguring to the personal appearance or are accompanied by more or less burning, itching, or other uncomfortable and painful sensations, it must be admitted that this disease is the most important of all skin affections for the physician to know and to treat intelligently.

Eczema is an inflammatory acute or chronic disease of the skin, characterized at its commencement by erythema, papules, vesicles or pustules, or a combination of these lesions, accompanied by more or less infiltration and itching, terminating either in discharge, with the formation of crusts, or in desquamation.*

It is eminently a protean disease. At one time it begins as an erythema; later this may become moist and secret-ing, and finally terminate in a thickened, dry, and desqua-mative surface. At another time the affection may begin

* The following definition would perhaps more accurately express the prevalent ideas of dermatologists, but while inclined to adhere to it I have decided to leave the former definition for the present. "*Eczema is a chronic parasitic catarrh of the skin with desquamation, itching and the tendency when irritated to result in exudation and severe inflammation.*"

in the form of vesicles or pustules, with swelling and heat. These soon burst, and a red, weeping surface results, which is soon coated with bulky crusts from the drying of the liquid, gummy discharge. The character of the patch may then suddenly change, and instead of a weeping surface there may exist a dry, scaly, infiltrated, fissured patch of skin, which continues until the disease is removed. Or, again, papules may first appear; these may remain as such throughout their course, or may pass into other lesions, or they may be associated sooner or later with vesicles.

There is no other disease of the skin in which the lesions undergo such sudden and manifold changes, and every variety may manifest itself in turn upon the same individual.

More or less itching is almost always present in eczema. It may vary in degree from the merest titillation to unendurable torture. Sometimes burning takes the place of itching; at other times they occur together.

Eczema may be acute, running its course in a few weeks and then permanently disappearing, or it may be chronic and continuous, or recurring through years. It may occur in small patches, single or multiple, or more rarely covering extensive surfaces. Unless very extensive it is not ushered in by constitutional symptoms.

The varieties of eczema are named according to the lesions which the disease assumes at its beginning. These are as follows:—

Eczema Erythematosum.—This form shows itself in typical cases, first as an undefined erythematous state of the skin, occurring in small or large patches without discharge or moisture. Commonly the patch, which is sometimes slightly infiltrated, is covered with fine, thin scales of epidermis, and now and then the surface is slightly excoriated. The skin may be bright or dark red or even violaceous. It often has a yellowish tinge. It is occasionally mottled. The process may affect a small surface or a large one; it is

often better one day and worse the next, or it may even go away entirely only to return a little later. It is apt to be chronic, and the relapses are annoying and discouraging, especially in winter time. Exposure to external heat or cold, a heavy meal or indulgence in alcoholic drink, is apt to be followed by an exacerbation of the disease. Burning and itching, alone or together, are prominent symptoms. Eczema erythematosum may run its course as such, or may develop into Eczema squamosum. Vesicles or pustules are rarely seen. Eczema erythematosum is most apt to occur upon the face and genitals.

Eczema Vesiculosum.—Vesicular eczema commonly begins by a feeling of heat and irritation in the part, which shows a diffused or punctate redness, with itching and burning, and small vesicles soon show themselves, either alone or grouped, or sometimes running together. They are soon filled with a yellowish, gummy fluid, and then they ordinarily break or form a crust. Sometimes, however, the vesicles simply dry up without breaking. In more marked cases new crops of vesicles continue to come out, and when a considerable surface is covered, the quantity of fluid poured out is quite large, and the underclothing or dressings are saturated. When the secretion dries, it is very sticky and tenacious, and this is characteristic of this form of eczema. Typical eczema, as described, is not so common as the more complex varieties where the lesions are multiform, papules, papulo-vesicles, vesicles, pustules, and other lesions being found in conjunction. The two chief characteristics of this form of eczema, wherever found, are the itching and the gummy secretion, leaving a yellow stain upon the linen. Patients are almost always struck by this feature.

Vesicular eczema may occur in very small patches, or in quite extensive areas. As it shows itself in children over the face and scalp, it forms the eruption popularly known as *milk crust*, *scalled head*, *tooth rash*, or *moist tetter*.

Eczema Pustulosum (*Eczema Impetiginosum*).—Pustular eczema is very much the same in its original appearance as vesicular eczema, only that the lesions assume the form of pustules rather than of vesicles. There is usually less heat and itching. A strict line cannot be drawn between the two forms, for they are apt to run into each other, and may coexist on the same subject and in the same patch. The scalp and face are favorite seats of pustular eczema, and it is apt to occur in children who are badly nourished or who are being brought up by hand. It also occurs in ill-fed and scrofulous adults. The same causes which would bring on vesicular eczema in a tolerably healthy individual will arouse the pustular form in a poorly nourished person. For this reason pustular eczema always calls for tonic and supporting treatment.

Eczema Papulosum.—Papular eczema appears in the form of small, round or acuminate papules, varying in size from a small to a large pin's head. In color the lesions are bright or dusky red, sometimes violaceous. They may be discrete, or may run together, forming large patches, and these are often infiltrated. Now and then they become abraded and moist, forming eczema rubrum. Papular eczema is apt to occur on the arms, trunk, and thighs, especially the flexor surfaces. It may involve a very small surface, or it may cover a large area of the body, and it is apt to be the most stubborn, troublesome, and annoying of all the forms of eczema. Itching is the most prominent and troublesome symptom; at times this is agonizing. Patients tear and gash themselves in their efforts to gain relief, and I have seen chronic cases where the nails have been worn to the quick and the ends of the fingers polished by the almost ceaseless efforts of the patient to assuage the torment, if only for a moment.

Eczema Rubrum.—This must be regarded rather as a secondary condition resulting from previous morbid action,

than a distinct variety. It is a variety only in a clinical sense. It may result from eczema erythematosum, vesiculosum, pustulosum, or papulosum. In eczema rubrum the surface of the skin is inflamed and infiltrated, red, moist, and weeping; occasionally it is more or less covered with yellowish or brownish crusts, often completely overspreading the part. Unless artificially detached, these crusts may sometimes continue to adhere, the process of exudation meanwhile going on underneath. Under these circumstances the appearance of a rough, dirty, yellowish or brownish scale is observed, instead of the shining, red, oozing surface. Eczema rubrum may occur upon any part of the body, although it is most commonly found upon the legs or the flexures of the joints, particularly the former. The swollen, infiltrated, violaceous, red leg of eczema rubrum, with its varicose veins, its glazed and shining or raw surface oozing serum at a thousand pin-head orifices, with furious itching and burning, is a characteristic spectacle not to be forgotten when once seen.

Eczema Squamosum.—Scaly eczema is an important clinical variety of the disease. Like *E. rubrum*, it follows and results from the erythematous, vesicular, pustular, or papular forms of the disease. It is particularly apt to succeed erythematous eczema. When typical, it shows itself in the form of variously sized and shaped reddish patches, which are dry and more or less scaly. The skin is always more or less infiltrated or thickened. Squamous eczema may be only an ephemeral stage in the evolution of the disease. More commonly, however, the term is applied to denote a chronic condition, which may last for a long time.

Other lesions are encountered in eczema which are worthy of mention. These are *rhagades* or fissures, occurring when the diseased and infiltrated skin becomes cracked by flexure, as about the joints or at the margins of the lips

or anus. Chapped hands, for example, are typical instances of fissured eczema. Sometimes eczema may assume a warty condition, and at other times hard, sclerosed patches may form.

In addition to the clinical varieties of eczema above described, the disease may fitly be divided into varieties, according as it assumes the *acute* or *chronic* form. The division, which is a distinct one, refers not so much to the actual duration of the disease as to the pathological changes which occur during its course. When the general inflammatory symptoms are high and the secondary changes insignificant, the disease may be said to be acute. When, however, the process has settled into a definite course, the same lesions continually repeating themselves, accompanied by secondary changes, the disease is to be considered chronic.

Eczema is, as I have said, by far the commonest of all skin diseases. It attacks persons in all grades of society, and occurs at all ages and in both sexes. In some cases it appears to be, in a certain sense, hereditary. I have found it commonly in the children of persons of light complexion, with fair to reddish hair, with a tendency to scrofulous affections. Some persons are so prone to eczema that the slightest provocation will bring on the eruption, and an attack of dyspepsia, which in another person would have no effect on the skin, or contact with an irritant which in most persons would only cause a transient dermatitis, are, in such individuals, a sufficient cause to bring out an eczematous eruption. Dyspepsia and constipation are among the commonest constitutional causes of eczema. In certain individuals the presence of an excess of uric acid and urates in the system is sufficient to produce and keep up eczema. The occurrence of gout and rheumatism in connection with eczema has often been alluded to by writers. I am inclined to think, however, that gout is

among the rarer exciting causes. Improper food, as to quantity and quality, acts as an exciting cause. During a period of commercial depression which occurred some years ago, I found many working people the subjects of eczema, clearly brought on or much aggravated by coarse and insufficient food. It is, however, among infants and young children that this cause of eczema most frequently comes into play. Pregnancy and lactation, debility, nervous exhaustion, excessive mental or bodily work, dentition, vaccination, internal irritation, as of ascarides or tænia in the bowels, may also determine the eruption of eczema.

Eczema in most of its forms cannot, strictly speaking, be called contagious. When a purulent discharge exists, however, the disease may be self-inoculated or transmitted. It cannot be acquired from being in contact with or handling the discharge.

Among the local causes of eczema, which are numerous and important, and which give rise to the condition known as "artificial eczema," are certain cutaneous irritants, as croton oil, mercurial ointment, tincture of arnica, tincture of cantharides, mustard, antimonial ointment, sulphur, and turpentine. Here also may be mentioned the rhus venenata and toxicodendron, the poison oak and ivy. All these irritants, and especially the latter, usually at first provoke dermatitis (see *Dermatitis venenata*), yet in certain individuals and under certain circumstances this may pass on to true eczema. Heat and cold, excessive perspiration, especially about the genitalia, and other places where the skin inclines to form folds, may give rise to the affection, which under the latter circumstance is known as *eczema intertrigo*.

Eczema is of much commoner occurrence in the winter than in the summer. The atmosphere of January and February, and particularly the cold bleak weather of March, seem to favor the occurrence of the disease. Many cases of eczema get well in summer only to recur again in win-

ter. On the other hand, however, cases are occasionally encountered where the attack only occurs in summer time, relapsing thus year after year.

Water, as in water dressings or in fomentations, or in the inordinate use of bathing, may be a cause of eczema. The insensate declamation against filth, or want of personal cleanliness, as an almost universal cause of skin diseases, which is too common, not only among superficial writers, but among physicians who ought to know better, would in many cases be better replaced by a caution against excessive ablution. The custom of very frequent bathing, especially when soap is used, is often harmful to the skin to a considerable degree. Alkalies, acids, strong and harsh soaps, may give rise to chapping and fissuring of the skin and to eczema. Finally, among the local causes of eczema may be mentioned the irritation caused by the presence of lice and itch mites, together with the scratching to which they give rise.

The diagnosis of eczema is of great importance, especially as the disease shows itself in such protean forms. There are, however, certain features of eczema, one or more of which are present in every case of the affection, and these may serve to aid in the diagnosis. Inflammation of the skin exists in a greater or less degree in all cases of eczema. It is indicated by a certain thickening of the skin, which may usually be seen by the eye, and in most places detected by rolling a small pinched-up portion of the skin between the finger and thumb. Swelling and œdema exist in all acute eczemas, and often in chronic cases. The patch is red and congested. In most cases of eczema there has been more or less fluid exudation or moisture, at one stage or another, in the history of the disease. This is termed "weeping," "discharging," or "running." The fluid may be clear, limpid, and yellowish, or turbid and puriform, or it may contain blood. This

discharge is a most characteristic feature of eczema, and is not present in any other disease. The crusts formed by the drying up of the discharge are characteristic. When this has been copious the crusts form rapidly, and in quantity so as sometimes to cover and mask the skin. They are yellowish, brownish, or greenish in color, and when removed show a moist surface beneath, but no ulceration. Among the most important diagnostic symptoms of eczema is the subjective one of itching. It is often intense, being more marked than in other diseases. It is rarely altogether absent, though it may vary much in degree. Burning is also a not infrequent subjective symptom, being more apt to be present in erythematous eczema, and often giving way to itching as the disease progresses. The itching of eczema often gives rise to an irresistible inclination to scratch, as was noted in speaking of the papular variety of the affection.

The diseases with which eczema is most likely to be confounded are the following:—

Erysipelas sometimes resembles eczema erythematosum, especially as it occurs upon the face. It is, however, acute; it begins at a given point and creeps slowly from place to place. The inflammation is a deep one; the surface is smooth, shining, tense, and more or less dusky red, while deep infiltration, œdema, heat, and swelling exist underneath. Erysipelas is also accompanied by considerable fever and constitutional disturbance. There is no discharge from erysipelas save that from bursting bullæ, which sometimes form during the latter stages of the disease.

Urticaria, particularly that variety accompanied by the formation of small, papular lesions, is occasionally mistaken for eczema papulosum. The irritable condition of the skin, the history of itching and burning occurring before the appearance of the lesions, all characterize urticaria in contradistinction from eczema. If, when the edge of the

finger nail, a pin, or other sharp object be drawn along the skin, a raised white welt, rapidly changing to red, is observed, urticaria is usually present.

Herpes zoster sometimes resembles eczema vesiculosum, but is distinguished from it by the arrangement of the vesicles, the more regular grouping of the lesions of zoster along the line of some well-known nerve trunk, and the ordinary occurrence of neuralgia in connection with the zoster eruption.

Pityriasis, as it occurs upon the scalp, is often very difficult to distinguish from eczema squamosum occurring in the same locality. The difficulty of diagnosis is occasionally enhanced by the simultaneous occurrence of both affections upon the same individual. In eczema, however, the scales are larger, less abundant, and dryer than in pityriasis. Eczema is more apt to occur in a patch on the scalp, while pityriasis is more generally diffused. The skin in eczema is usually red and inflamed, and is always itchy; in pityriasis it may be even paler than normal, and may have a dull, leaden hue. It is commonly less itchy, also.

Psoriasis is often confounded with eczema, the diseases, when occurring in limited patches or upon the scalp, being sometimes almost indistinguishable. Old, infiltrated, inflammatory patches are especially difficult to make out, but in psoriasis the edges usually terminate abruptly, while in eczema they are more apt to fade into the surrounding skin. The scales on eczema patches are thin and scanty; on the patches of psoriasis they are comparatively more abundant, larger, silvery, and imbricated. In eczema there is usually some history of moisture or weeping, in one stage of the disease or another; in psoriasis the process is always dry. The distribution of the disease, and the occurrence of patches on other parts of the body, may aid in the diagnosis. In doubtful cases, where only a few scattered lesions are presented for examination, the whole surface should be

diligently searched over, for a single lesion in some part of the body may, by its typical aspect, betray the nature of the disease where the majority of the lesions are quite doubtful in appearance.

Lichen ruber planus may be confounded with eczema, but the peculiar shape of the lesions in lichen ruber planus, to be described further on, together with their dusky hue, and the fact that they usually run a quiet, chronic course, without change, and leave a deep stain behind, all seem to distinguish this affection from eczema.

Fityriasis rubra is a very rare disease, and is seldom met with in this country. It presents symptoms which resemble closely those of generalized erythematous and squamous eczema. It may be distinguished, however, by its universal redness; the abundance of large, thin, papery, whitish, epidermic scales, which continually reproduce themselves; slight itching; burning heat; and, lastly, by the absence of marked infiltration and thickening of the skin, a symptom common in eczema. It undergoes but slight changes throughout its course.

Tinea circinata is sometimes mistaken for eczema, but the course of the two diseases is quite different, and the microscope will almost invariably settle the question of diagnosis by showing the presence or absence of the characteristic fungus of tinea. *Tinea tonsurans*, in its milder and more chronic stages, may readily be mistaken for eczema; the diagnostic points will appear in the description to be given of that affection later on.

Sycosis, both of the parasitic and non-parasitic varieties, sometimes resembles eczema of the beard. The former, however, is scantily crusted, and when the crusts are removed, instead of the smooth, soft surface of eczema, a rough, dusky-red, mamillated surface is revealed. The loose hairs are also loaded with the characteristic microscopic fungus about their roots. *Sycosis non-parasitica* is

essentially an inflammation of the hair follicles, and while eczema is superficial, sycosis usually spares the surface and attacks the hair follicles only.

Favus, a disease of rather rare occurrence in this country, sometimes resembles eczema; but the peculiar canary-yellow color of the favus crusts and their mouse-like odor is almost unmistakable, and the microscope will quickly settle the question of diagnosis, for the peculiar fungus of favus is very abundant in the lesions of this disease.

Scabies is very likely to be confounded with eczema, and the diagnosis is often difficult. This can easily be understood when it is considered that the eruption of scabies is, in fact, largely an eczema. Eczema, however, does not show the marked preference for certain localities, as the hands and fingers, buttocks, axillæ, abdomen, mammæ, nipples, and penis, which scabies displays. But, chiefly, the presence or absence of the peculiar burrow of the itch insect will decide almost infallibly between the two affections.

Syphilis.—Eczema of the scalp is at times liable to be mistaken for syphilis. There is a form of pustular eczema, characterized by the presence of a few scattered lesions of the scalp, without a sign of disease elsewhere, which it is sometimes difficult to differentiate from the pustular syphiloderma of the scalp. The occurrence or absence of a history of syphilis, or of concomitant syphilitic lesions in other parts of the body, and the success or failure of a treatment other than anti-syphilitic, will demonstrate whether one or the other affection is present. Occasionally fissures with abundant purulent secretion occur on the scalp in the course of syphilis, and this form of the eruption may closely resemble confluent pustular eczema. I met with such a case some years ago, where the diagnosis was extremely difficult, and where the ordinary anti-syphilitic remedies even failed for a time to give relief. The disgusting odor which ordinarily accompanies the discharge from this form of

syphilitic disease will usually, however, serve to distinguish it.

The following tables will present the differential diagnosis of eczema in a more graphic form :—

DIFFERENTIAL DIAGNOSIS.

BETWEEN

ECZEMA (ERYTHEMATOSUM).

1. Not contagious ; frequently history of eczema elsewhere.
2. Accompanied by mild symptoms.
3. Little or no œdema, but some infiltration, shown by the thickness of the skin on pinching up a roll between the fingers. Surface dull red and often slightly scaly.
4. Not a creeping disease, though it may spread irregularly.
5. Inflammation less acute and more superficial.
6. Itching perhaps more marked than burning
7. Not apt to be painful on pressure.
8. Not unfrequently some secretion at one stage or another.
9. Vesicles form early if at all.
10. Runs a chronic course.
11. No line of demarcation.

ERYSIPELAS.

1. Frequently history of contagion.
2. Well-marked constitutional symptoms.
3. Shining redness, the skin tense, marked œdema.
4. A creeping eruption, spreading peripherally.
5. Inflammation very acute and deep seated.
6. Intense burning and little pruritus.
7. Usually very painful on pressure.
8. No discharge except from ruptured blebs.
9. Vesicles or rather blebs form late.
10. Runs a rapid course.
11. A distinct line of demarcation.

ECZEMA (PAPULOSUM).

1. History of eczema.
2. Eruption appears more gradually.

URTICARIA.

1. Often history of error in diet, or dyspepsia.
2. Eruption appears suddenly.

ECZEMA (PAPULOSUM).

3. Often extensive.
4. Lasts usually for weeks.
5. Absence of blood crusts, excepting in connection with the papular lesions.
6. Usually accompanied by other forms of eczema.
7. Itching severe. Not so much burning or pricking. Not so markedly aggravated by currents of air, etc.
8. Eruption remains the same for days.
9. Skin not especially irritable.

ECZEMA VESICULOSUM.

1. Begins with a slight burning or itching.
2. Vesicles seldom form distinct groups.
3. Vesicles tend to run together.
4. Vesicles small.
5. Vesicles tend to rupture.
6. Formation of crusts.
7. Eruption accompanied by more or less intense itching.
8. No special arrangement of lesions.
9. Eruption occurs on both sides.

ECZEMA (SQUAMOSUM).

1. Presence of moisture at some time.

URTICARIA.

3. Usually not extensive.
4. The separate attacks may last but a few hours.
5. Frequent presence of blood crusts from scratching as the only evidence of the disease.
6. Not accompanied by other forms of eruption elsewhere.
7. Itching, tingling, pricking, and burning intense. Usually aggravated by currents of cold air, undressing, etc. Often intense nervousness.
8. Exacerbations may occur in a few hours.
9. Welts form immediately on irritation of the skin.

HERPES ZOSTER.

1. Neuralgic pains a premonitory symptom.
2. Vesicles are arranged in distinct groups.
3. Vesicles markedly distinct and independent.
4. Vesicles large.
5. Vesicles do not rupture spontaneously.
6. No crusting unless vesicles are accidentally ruptured.
7. Burning pain, often lancinating, accompanies the eruption.
8. Eruption follows the course of some nerve.
9. Eruption limited to one-half of the body.

PITYRIASIS (CAPITIS).

1. Always a dry disease.

ECZEMA (SQUAMOSUM).

2. Skin red and thickened.
3. Scales more firmly adherent.
4. Ears frequently affected.
5. Alopecia less frequent, and the hair usually returns after the eczema is cured.
6. Hairs frequently matted together.

PITYRIASIS (CAPITIS).

2. Skin not thickened nor inflamed.
3. Scales easily detached.
4. Disease limited to scalp.
5. Frequently more or less baldness ensues after a time.
6. Hairs surrounded by a scaly sheath.

ECZEMA (SQUAMOSUM).

1. Eruption fades gradually into surrounding skin.
2. Scales thin and scanty.
3. Presence of moisture at some stage.
4. Lesions change in character from time to time.
5. Scales small and yellowish.
6. Intense itching.
7. Patches of eruption large and irregular.
8. No seat of predilection.
9. No uniformity of lesions.
10. Considerable induration of patches.
11. Ears and face frequently attacked in eczema of the scalp.

(PSORIASIS.)

1. Patches of eruption sharply defined.
2. Scales thick and abundant.
3. Eruption always dry.
4. Eruption remains the same from week to week.
5. Scales large and pearl-like.
6. Itching less severe.
7. Patches of eruption smaller and round.
8. Seat of predilection on knees, elbows, etc.
9. Great uniformity of lesions.
10. Less induration but greater vascularity.
11. When affecting scalp, usually limited to hairy parts, just extending to the edge and limited by an abrupt line of demarcation.

ECZEMA (PAPULOSUM).

1. No desquamation.
2. Lesions remain papular for weeks.
3. Severe itching.

LICHEN RUBER (PLANUS).

1. Desquamation.
2. Remain papular for months.
3. Usually slight itching.

ECZEMA (PAPULOSUM).

4. Papules rounded and more or less acuminate.
5. Papules rounded in outline.
6. Color of lesions bright red.
7. Lesions irregularly arranged.
8. Little or no subsequent pigmentation.
9. Papules often unite, losing their identity.
10. Health remains good in most cases.

ECZEMA (SQUAMOSUM).

1. Redness occurs in patches.
2. Intense itching and some burning.
3. Scales small and bran-like.
4. Scales form slowly.
5. Skin infiltrated and thickened.
6. Exudation present at some period.
7. Scales not very abundant.
8. Affection common.
9. General health remains good.

ECZEMA SQUAMOSUM.

1. Eruption usually irregular in shape.
2. Margins ill defined.
3. Scaling bran-like and abundant
4. Not contagious.

LICHEN RUBER (PLANUS).

4. Papules flat or slightly depressed in the centre.
5. Papules have a peculiar squarish or angular outline.
6. Color of lesions dull red or violaceous.
7. Lesions sometimes seem to follow nerve trunks.
8. Lesions leave some pigmentation or staining.
9. Papules retain their individuality, although forming patches.
10. Health often impaired.

PITYRIASIS RUBRA.

1. Uniform redness.
2. Slight itching and no burning.
3. Scales large and papery.
4. Scales reproduced rapidly.
5. Skin not infiltrated.
6. Process always a dry one.
7. Scales very numerous.
8. Rare disease.
9. Severe constitutional disturbance after disease has lasted some time.

TINEA CIRCINATA.

1. Eruption circular in form.
2. Margin well-defined and raised.
3. Slight shreddy desquamation.
4. Communicable.

ECZEMA SQUAMOSUM.

5. Irregular character of eruption.
6. Does not heal from centre.
7. Usually a chronic affection.
8. Non-parasitic disease.

TINEA CIRCINATA.

5. Eruption ring-shaped.
6. Tendency to heal from center.
7. Disease runs an acute course.
8. Presence of mycelium under the microscope.

ECZEMA (PUSTULOSUM).

1. Non-parasitic disease.
2. Not communicable.
3. No peculiar odor.
4. Exudation purulent.
5. Hairs appear normal.
6. No permanent loss of hair.
7. Eruption never ends in ulceration or cicatrization.
8. Crusts moist and sticky.
9. Acute course of disease.

FAVUS.

1. Peculiar vegetable parasite to be found in abundance under microscope.
2. Contagious.
3. Lesions have a characteristic mouse-like odor.
4. Exudation dry and powdery, canary yellow lesions cup-shaped.
5. Hairs brittle, dry, and wiry.
6. Eruption gives rise to scars and alopecia.
7. Disease may result in cicatrization.
8. Crusts dry and friable.
9. Very chronic affection.

ECZEMA (PAPULO-PUSTULOSUM).

1. Non-parasitic disease.
2. No burrows.
3. Not communicable.
4. Vesicles and pustules confluent.
5. Eruption sudden and not progressive.
6. Vesicles clear.
7. Pruritus less severe.

SCABIES.

1. Presence of parasites.
2. Presence of burrows.
3. Very contagious.
4. Vesicles, papules, and pustules discrete.
5. Eruption progressive.
6. Irregular dots on vesicles.
7. Itching intense, especially at night.

ECZEMA (PAPULO-PUSTULOSUM).

8. No special seat of election.
9. Scalp may be affected.
10. Individual lesions usually small.
11. Vesicles usually rupture.

SCABIES.

8. Lesions found especially between fingers; on flexor surface wrists; on anterior fold of axilla; about nipples; on shaft or head of penis; buttocks; popliteal spaces.
9. Disease very rarely affects scalp.
10. Vesicles and pustules often very large.
11. Vesicles do not rupture spontaneously.

ECZEMA (ERYTHEMATOSUM).

1. History frequently of eczema.
2. Eruption limited in extent.
3. Patches of eruption quite large.
4. Intense itching.
5. Lesion bright red color.
6. Usually accompanied by other forms of eczema.
7. Slight scaling, but no pigmentation.
8. Skin thickened.

SYPHILODERMA (ERYTHEMATOSUM).

1. History of chancre.
2. Eruption diffuse.
3. Individual lesions small.
4. Rarely much itching, if any.
5. Coppery fawn or pale rose color.
6. Presence of other syphilitic symptoms.
7. No scaling, but pigmentation.
8. No induration of skin.

ECZEMA (PAPULOSUM).

1. History of eczema.
2. Eruption usually limited in area.
3. Superficial eruption.
4. Eruption usually moist at one time or another.
5. Severe itching.
6. Lesions less distinct.

SYPHILODERMA (PAPULOSUM).

1. History of syphilis.
2. Eruption extensive.
3. Eruption deep seated.
4. Eruption dry from the first.
5. Little or no itching.
6. Lesions have a firm, shotty feel.

ECZEMA (PAPULOSUM).

7. Vesicles not unfrequently associated with papules.
8. Lesions more acute and active.
9. Lesions tend to group and unite.

ECZEMA (SQUAMOSUM).

1. History of eczema.
2. Eruption superficial.
3. Intense itching.
4. Eruption moist at one time or another.
5. Eruption red in color.
6. Scales abundant and thick.
7. Infiltration less marked and inflamed.
8. Margins indistinct and not abruptly elevated.
9. Heals first at edges.
10. Lesions active and inflammatory.
11. No secondary lesions except large painful glands in neighborhood of eruption.
12. Eruption has an irregular outline.

ECZEMA (PUSTULOSUM).

1. History of eczema.
2. Often itching.
3. No bad odor.
4. No ulceration.
5. No scarring.
6. Eruption usually confluent in large patches.
7. Scales less prominent and never stratified.

SYPHILODERMA (PAPULOSUM).

7. Distinctly papular.
8. Lesions chronic and passive.
9. Lesions usually discrete.

SYPHILODERMA (SQUAMOSUM).

1. History of syphilis.
2. Eruption deep seated.
3. Slight itching.
4. No discharge.
5. Eruption ham-colored.
6. Scales scanty and thin.
7. Infiltration of skin marked and cellular.
8. Margin elevated and well defined.
9. Tendency to heal at centre.
10. Lesions passive and but slightly inflamed.
11. Presence of secondary lesions.
12. Tendency to occur with circular outline.

SYPHILODERMA (PUSTULOSUM).

1. History of syphilis.
2. Itching absent or moderate.
3. Odor very disagreeable.
4. Ulceration under crusts.
5. Lesions leave scars.
6. Lesions discrete or form small irregular patches with circular outline.
7. Scales prominent and often in the form of rupia (oyster-shell like).

ECZEMA (PUSTULOSUM).

8. Vesicles present at some stage.

9. Eruption develops rapidly and disappears sooner.

10. Crusts moist.

11. Scales less adherent.

12. Absence of secondary lesions.

SYPHILODERMA (PUSTULOSUM).

8. Pustules usually occur alone.

9. Lesions develop slowly and last long.

10. Crusts dry.

11. Scales adherent.

12. Presence of secondary lesions.

In a work like the present it is obviously impossible to do more than indicate, in a general way, the plans of treatment suitable in the various forms of eczema. The reader is referred to the larger works on skin diseases, and especially to the various monographs, as those of McCall Anderson and Bulkley, which deal with the subject in a more comprehensive manner.

Eczema is a perfectly curable disease, but for its relief both internal and external remedies must at times be employed. Constitutional remedies judiciously employed are almost always needful, and prove of decided benefit in the majority of cases. In some cases, as where the eruption is local and due to some external irritant or where it is exceedingly limited in extent, no internal measures are called for. The subject of diet must be carefully attended to; all articles which are difficult of digestion must be avoided, and especially salt or pickled meats, pastry, cabbage, cheese, and beer, or wine.* The bowels should be carefully regulated; dyspepsia is often the sole exciting cause of eczema, and the physician who desires to treat this affection in any of its forms with success, should be prepared to deal with dyspepsia in the majority of cases. The condition of the kidneys should be looked into. Diuretics are frequently of value. Saline laxatives are frequently called for in the treatment of eczema, and among these

* See Appendix, on Diet in Diseases of the Skin.

the following tonic aperient, to which the name of "Mistura ferri acida" has been given, is one of the best:—

R.	Magnesii sulphatis,	℥j	
	Ferri sulphatis,	℥ss	
	Sodii chloridi,	gr. x	
	Acidi sulphurici dil.,	f℥j	
	Infus. quassiae, ad	f℥iv.	M.

SIG.—A tablespoonful in a tumbler of water, before breakfast.

This preparation, though extremely disagreeable on first taking, becomes much less revolting after using for a short time, and even delicate women can take it readily. It is important that the full quantity of water should be taken, as the volume of fluid seems to influence the action of the medicine. Sometimes hot water is less unpalatable with this mixture than lukewarm or cold water. In some cases, especially in winter time, the proportion of magnesium sulphate must be increased. The laxative mineral spring waters, as the Hathorn and Geyser springs of Saratoga, or the Hunjadi Janos, among German mineral waters, are beneficial in many cases. I like the Hunjadi Janos best for most cases, and I sometimes prescribe it after a short course of the Mistura ferri acida, as its use can be kept up indefinitely without an increase of dose. In infantile eczema, where constipation exists, the simple unsipped syrup of rhubarb, in repeated small doses alone or with magnesia, is often found desirable. A very good powder (though powders are disagreeable prescriptions for children, I know not what to substitute for this) is the following:—

R.	Hydrarg. chlor. mite,	gr. vi-xij	
	Pulv. rhei,	gr. xvij	
	Magnesiae calcinat.,	℥ss.	M.
	In Chart. No. vj div.		

SIG.—One, at night.*

* A fungus sometimes forms in this solution, but its occurrence may be hindered by the addition of 2 grains of boric acid to the ounce, or, better, by observing antiseptic precautions in the preparation of the mixture.

This is for an infant six months to a year old, of average strength. In weakly infants the dose of calomel and rhubarb should be slightly reduced. The powder should be continued until its effect is seen. Purgation, however, should not be induced. A somewhat similar prescription, without the mercurial, and in a fluid form, is the following:—

R. Pulv. rhei,
Sodii bicarb., āā ℥j-ij
Aquæ menth. pip., f ℥iv. M.
Sig.—A teaspoonful, after meals.

This dose is given thrice daily.

Elliott (*International Medical Magazine*, October, 1892) uses the following on young babies:—

R. Hydrarg. chlor. mite, gr. $\frac{1}{100}$
Ol. ricini,
Mist. cretæ,
Aquæ, āā ℥xv. M.
This dose is given thrice daily.

In adults, especially when the eczema is acute, and occurs in a robust, sthenic individual, the laxative treatment is best introduced by a brisk mercurial purgative. Especially is this the case when the patient is suffering from constipation when first seen. Here the bowels are to be thoroughly unloaded, to begin with, and then we may enter upon the more direct treatment of the disease. It is wonderful to see what a good effect two or three compound cathartic pills, or six grains of blue mass, given the evening before the administration of *Mistura ferri acida*, will have on the patient's comfort, external and internal. Some good authorities, I know, deprecate the employment of cathartics in the treatment of eczema, but the general experience is in favor of thus beginning the treatment,—in acute, inflammatory eczema, be it understood,—and this is certainly my advice. Afterward let the case be treated internally, on general medical principles, and let cathartics

and laxatives be given or withheld, as the patient's condition suggests. In old persons, particularly when the patient has been a high liver or is rheumatic, or in those unusual cases where a gouty element may exist, diuretics and alkalies are indicated. In such conditions the following prescription was recommended by the late Tilbury Fox:—

R. Magnesii sulphat., ℥ iv
 Magnesii carbonat., ℥ j
 Tinct. colchici., ℥ xxxvj
 Ol. menth. pip., ℥ ij
 Aquæ, f ℥ vij. M.

SIG.—Two tablespoonfuls in a wineglass of water, every three or four hours.

The following formula, suggested by Hardaway, has been found useful:—

R. Ol. morrhue, f ℥ iv
 Pancreatin saccharat., ℥ j
 Pulv. acaciæ, q. s.
 Glyceriti hypophosphiti,
 Syr. calcis lactophosphatis,
 Aquæ, āā f ℥ iv
 Ol. gaultheriæ, gtt. xxx. M.
 Ft. Emulsio.

SIG.—Tablespoonful three times a day, after meals.

The acetate and carbonate of potassium in full doses, and also the alkaline mineral waters, may be employed. In persons of debilitated constitution or in scrofulous persons, particularly in the badly-nourished children of tuberculous parents, cod-liver oil is demanded, and iron in various forms is to be recommended in some cases. The following prescription is one which I often employ with satisfaction:—

R. Tinct. ferri chlor., āā f ℥ j
 Acidi phosphorici dil., āā f ℥ j
 Syrupi limonis, ad f ℥ iv. M.

SIG.—A teaspoonful in a wineglass of water, after meals.

Syrup of the iodide of iron and wine of iron are also eligible preparations, particularly for children. Quinine and strychnia are sometimes called for by the general condition

of the patient. Arsenic is useful in a limited class of cases, more especially in arsenic cases where it acts as a tonic simply and not in any way as a specific. In former times the use of arsenic in eczema of all grades and varieties was much abused, and even now it too often forms a part of that routine treatment which is the refuge of ignorance. Frequently, so far from doing good, it does harm by upsetting the stomach, and its effect seems to be particularly pernicious in some acute and inflammatory forms of the disease. Tar has been used in some chronic cases internally, with benefit. Sulphur-spring waters are also said to be used occasionally. I have no personal experience with regard to these latter remedies, but my friend, Dr. Forrescue Fox, the accomplished resident-physician of the Strachpeffer Spa in Scotland, assures me that he finds those strong sulphur waters very effective when used under competent direction.

Regarding the local treatment of eczema, ordinary water may be employed for washing purposes, in most cases; when the skin is delicate and sensitive, distilled water or water made milky by the addition of some bran or starch. It is generally better to use water which has recently been boiled when this is practicable. A very good method of softening the water, particularly where it is to be applied to the face, is to take a handful of bran, sew it up in a small linen bag, and squeeze the bag, like a sponge, through a basin of water until the water is quite milky. This gives a soft and agreeable quality to the water when it is applied to the skin. The water may be used cold or warm, as best suits the feelings or fancy of the patient; but the most important point is not to use too much of it or too often. The best rule for the use of water in eczema is to use it as seldom and as sparingly as possible. The only two indications for its employment are either the removal of crusts or the cleansing from absolute and unendurable soiling;

water sometimes seems to act upon the eczematous skin almost like poison. White castile soap is ordinarily the only soap necessary to cleanse the skin of crusts and scales, but the superfatted soaps now put extensively upon the market are preferable in acutely inflammatory conditions (see *Soaps*); but occasionally the stronger potash soaps, the ordinary household soft soap, or the "sapo viridis" of Hebra, must be brought into use. Sometimes the "tinctura saponis kalinus," or solution of two parts of sapo viridis in one part of alcohol, may be used instead of the solid soaps. Whatever soap is employed, it should always subsequently be completely washed off the skin, unless a distinctly macerating or caustic effect is desired, or occasionally when the medicinal effect of some contained ingredient is desired.

The local treatment of eczema is of great importance; many cases can be cured by outward applications alone, and there are very few where these can be dispensed with entirely. Before instituting local treatment, the part affected should be examined, with the view of determining whether the disease is acute or chronic, and what the characteristic lesions, the amount of heat, redness, swelling, etc.; and also the condition of the epidermis, whether intact or torn and abraded. It is most important, also, to take into consideration the area involved, whether this be great or small, for not only must we be on our guard not to use irritant remedies, but it must be remembered also that some applications are poisonous by absorption, when applied over large raw surfaces.

In most cases of eczema there are certain secondary products, crusts, scales, and extraneous matter, which must be removed before the local remedies can be advantageously applied. Sometimes it is difficult to get patients to remove these extraneous matters; a feeble attempt is made, giving rise, perhaps, to pain or slight bleeding, and the statement

is offered that the "scab" cannot be gotten off. The mass of rancid grease, decomposing pus, serum, and sebaceous matters, mingled with epithelial debris, make a very poor covering, however, for an abrasion or ulcer which is to be healed, or to which local treatment is to be applied successfully. The physician should give the most precise directions as to the method of removing the crusts or, better, should, when practicable, remove them himself. Soap and water alone will not do this. Poultices made with hot almond oil and rendered aseptic, or at least sprinkled with boric acid, applied to the crusts after these have been themselves thoroughly saturated with the oil, will often suffice. At other times, compresses wrung out of hot water and covered with oiled silk will do better. Frequently a strong solution of carbonate of sodium, also applied on compresses, will soften crusts more rapidly than anything else. *Sapo viridis* spread on linen rags, like ointment, laid on the skin and covered with waxed paper or oiled silk, will soften the most stubborn crusts. Crusts in the scalp sometimes cling stubbornly, on account of the numerous hairs running through them. By lifting the edge gradually, and cutting away the hairs from underneath, the crust can be lifted expeditiously and without pain. I dwell on this little point because I have so often seen well directed treatment fail of its intention, because the way had not been prepared for the local remedies.

Two general principles may be mentioned with regard to the local treatment of eczema. These are, first, that in the acute form the treatment can scarcely be too soothing; secondly, that in the chronic form the treatment can hardly be too stimulating. Of course, these general principles must be modified somewhat, according to individual circumstances, especially with regard to the latter.

Acute Eczema.—When a remedy is to be applied for the first time to a case of acute eczema, it is usually better to

use it over a limited area until its effect is perceived, for it must be borne in mind that a remedy which has been of service in one case will not necessarily suit another, even when the general features of the disease are the same. If one remedy does not suit, another must be tried, for it is often difficult to decide beforehand what application will be most useful. The indication is to give ease to the patient, and medicaments must be changed, if necessary, until this end is attained.

Starch powder is best for large surfaces at first; the parts may then be covered with muslin or soft linen. Lycopodium, subnitrate of bismuth, dermatol, talc, or similar indifferent or antiseptic powders, alone or associated, may be employed on isolated patches.

The starch poultice is one of the most important moist applications. Potato starch is preferable. It should be mixed with 5 to 10 parts of boric acid per 1000, and then placed in a flat bag, dipped in boiling water, and allowed to cool before applying. In some cases the starch may be applied as a paste, and then covered with very fine soft linen and carefully fastened in place with bandages.

No form of treatment gives more relief in acute eczema if this is carefully applied and changed every three or, at most, six hours. In less severe cases, or in later stages of the disease, these moist applications may be made by covering the affected part with two or three turns of soft linen or muslin, impregnated with decoction of bran or starch water, and covered with *thin*, impermeable cloths. The linen dressings should be disinfected or re-disinfected before each application; care should be taken to avoid creases and folds. If the patient is cold or afraid of being cold, cotton or flannel may be applied over all. In severe cases impermeable cloths may be applied directly to the

skin, but these should be of the finest tissue, and not of that rubber cloth which is sometimes employed to the injury of the patient.

All these modes of treatment represent in reality the continuous bath; their action is most favorable, both in giving relief to the patient and in curing the disease. Careful attention to detail is, however, absolutely necessary.

In some severe cases of acute eczema benefit is obtained from oleaginous preparations. These should be made with sterilized oil, alone or with the addition of a small quantity of laudanum, bi-carbonate of sodium, boric acid, etc. The method of application is similar to that described above, and is to be employed with the same precautions.

In acute vesicular or erythematous eczema, water used in ablution is, as a rule, injurious, and irritates the skin. It should never be employed, except in cases of extreme necessity, for the absolute requirements of cleanliness. Patients, especially those belonging to the more refined classes, will sometimes rebel when, for instance, they are desired to abstain from washing the face; but occasionally uncleanliness, or what passes for such, must be enforced. In the place of washing, the affected part may be powdered, from time to time, with a dusting powder, such as the following:—

R.	Pulvis camphoræ,	3 ss	
	Pulvis zinci oxidi,	3 iss	
	Pulvis amyli,	3 vj.	M.

The following plan of treating acute vesicular eczema is that of Dr. James C. White, of Boston, which I have used in hundreds of cases with great satisfaction. I consider it one of the best forms of treatment for the majority of cases in the early acute stages of eczema. The affected part is

to be bathed with lotio nigra, or "mercurial wash" ("black wash"). This is used either in full strength, or else diluted with an equal part of lime-water, and daubed over the surface by means of a rag or mop, or applied by means of cloths saturated with the wash and allowed to remain on the surface. As a substitute for the ordinary wash, the following, nearly the same in character, may be used, especially on the face, as it clings better to the skin:—

- R. Hydrarg. chlor. mite, $\frac{3}{3}$ ss
 Mucilago tragacanthæ, $\frac{3}{3}$ j
 Liquoris calcis, ad $\frac{3}{3}$ xj. M.
- R. Hydrarg. chlor. mite, $\frac{3}{3}$ ss
 Liq. calcis, f $\frac{3}{3}$ xj. M.

After the wash has been applied for some minutes, oxide of zinc ointment, or in winter the following:—

- R. Pulv. zinci oxidi, gr. lxxx 5 20
 Ung. aquæ rosæ,
 Vaselini, aa $\frac{3}{3}$ iv. 15 50 M.

is applied gently with the finger, before the surface has had time to dry; and this treatment is repeated at intervals of a few hours. Sometimes "Lassar's Paste" may be substituted for this. As a rule the itching and burning is relieved at once, and occasionally the disease is arrested in its course. Sometimes the wash may be applied every half hour or hour, the ointment being laid on at longer intervals. I have often found the following lotion useful; it is to be applied on cloths:—

- R. Liq. plumbi subacetat. dil., Oss 3 | 20
 Glycerinæ, f $\frac{3}{3}$ ss. 20 M.

When there is a good deal of inflammatory action, and when the skin is thickened and more or less doughy and œdematous, I am in the habit of employing bread poultices, made of bread crumb mixed with ice-cold lead water. The sedative effect of this application is sometimes

extremely soothing and grateful. The following lotion is highly recommended in some cases:—

R.	Pulv. zinc. carb. præcip.,	℥ij	
	Pulv. zinci oxidi,	℥ss	
	Glycerini,	℥ij	
	Aquæ,	f ʒvj.	M.

It should be applied frequently, by means of a bit of rag or a rag mop, the sediment being allowed to remain on the surface.

Another very good remedy, in my experience, and one particularly adapted to the treatment of eczema covering a considerable surface, is the following:—

R.	Ext. grindeliæ robustæ, fld., . . .	f ʒss ad f ʒij	
	Aquæ,	Oj.	M.

This is preferably applied on cloths, which are permitted to remain in contact with the surface until nearly or quite dry, before removal. A lotion of sulphate of zinc, fifteen to thirty grains to the pint of water, acts admirably in some cases, especially in eczema about the hands. When itching is a severe and prominent symptom, applications of hot water, or of cloths wrung out of the same and applied in quick succession, as hot as may be borne, to the affected side, often allay this exasperating symptom when all else has failed. Carbolic acid, which is one of the most efficient anti-pruritics, can rarely be employed in the acute stages of eczema, but now and then, when burning is less prominent as a symptom, and when itching is most tormenting, it is of use. I often combine it with black wash, as thus:—

R.	Acidi carbolici,	ʒij-iv	
	Glycerinæ,	f ʒj	
	Lotio nigræ,	Oj.	M.

I find that the erythematous form of eczema, when the skin is yet unbroken, and when there is at the same time more or less inflammatory infiltration, is that in which carbolic acid is likely to agree. It must be applied with cau-

tion, however, in the acute stage of eczema, until it is found to agree with the individual case under treatment.

While, as a general thing, ointments are not found to agree in acute eczema, yet in a certain number of cases these preparations appear to suit better than lotions. The oxide of zinc ointment, the hard-ridden and universal remedy for skin diseases, here finds its legitimate sphere. Bulkley recommends that instead of being made with lard it should be made with cold cream, and should contain sixty instead of eighty grains of the oxide of zinc to the ounce. Both of these changes are, I think, improvements. Practically, I find the oxide of zinc ointment, as dispensed, too thick and almost tough, especially for winter use in this climate. So, for convenience sake, I ordinarily prescribe it mixed with an equal weight of vaseline or cosmoline. It should not be benzoated, or if benzoin is used it should be used in small quantity. The unguentum aquæ rosæ is a much better base for all or almost all ointments than lard or vaseline. The lard is apt to turn rancid, while the vaseline is too thin for ordinary use, although preferable, on this account, for use in the hairy parts.

Oleate of zinc, originally brought into notice by Crocker, of London, in 1878, enters into the composition of a number of ointments which are of frequent value in the treatment of acute eczema. It is made as follows: Take one part of oxide of zinc, and eight parts of oleic acid; stir together; allow to stand two hours; heat until dissolved. On cooling, a yellowish-white, hard mass results, which may be variously made into ointments. The following is one formula:—

R.	Zinci oleat.,		
	Olei olivæ,	āā	ʒiv. M.

Or it may be made up with cold cream:—

R.	Zinci oleat.,		
	Ung. aquæ rosæ,	āā	ʒiv
	Olei amygdalæ,		q. s. M.

Oleate of bismuth acts in very much the same manner. The following formula, brought into notice by Dr. McCall Anderson, is an elegant preparation when prepared with due pharmaceutical skill:—

R.	Bismuthi oxidi,	℥j	
	Acidi oleici,	℥j	
	Ceræ albæ,	℥iij	
	Vaselini,	℥ix	
	Ol. rosæ,	℥ij.	M.*

Subnitrate of bismuth is a very agreeable and slightly astringent as well as sedative remedy, when used in the form of ointment.

The following—

R.	Pulv. bismuth subnitrat.,	℥ss-℥j	
	Ung. aquæ rosæ,	℥j.	M.

is an excellent application in acute eczema of the scalp, particularly in children.

Diachylon ointment, made according to the formula of Hebra, with due care, and by a skilled pharmacist, is most grateful and soothing to the inflamed skin. I have, however, so frequently met with disaster in having this ointment made up by chance apothecaries, or at long intervals, that I have of late used it only rarely and as a last resort. I give the method of its preparation here, so that any one who may be fortunate enough to be able to depend upon first-class and conscientious pharmaceutical skill may have recourse to this ointment. It is composed as follows:—

R.	Olei olivæ opt.,	f℥xv	
	Pulv. lithargyri,	℥iij-℥vj	
	Aquæ,	q. s.	
	Coque. Fiat unguent.†		

* Rub up the oxide of bismuth with the oleic acid, and let it stand for two hours; then place in a water-bath until the bismuth oxide is dissolved; add the vaseline and wax, and stir till cold.

† The following directions are taken from Dubring: "The oil is to be mixed with a pint of water and heated, by means of a steam bath, to boiling,

Diachylon ointment is usually more effective when spread upon cloths than when rubbed in with the finger, and, in fact, the same may be said of all ointments applied with a view to their soothing effect. I usually bid the patient cut out bits of soft linen cloth to fit the part to be covered, and then to spread the ointment upon these as thick as butter upon bread. When applied, they should be covered with oiled silk or waxed paper, for cleanliness sake.

An ointment similar to the diachylon ointment may be made by adding two or three parts of olive oil to four of diachylon plaster, the two substances being melted together, and stirred until cool. The proportion of oil used will, of course, vary with the weather. I do not often use this preparation, as it is apt to be tough and stringy. It is what the average apothecary dispenses, however, when *unguentum diachyli* is prescribed, and is, I am sorry to say, now officinal.

Among other soothing dressings may be mentioned, finally, cold cream, cucumber ointment, glycerole of starch, almond and olive oils, and dilute glycerine. The olive oil

the finely-powdered litharge being sifted in and stirred continually; the boiling is to be kept up until the minute particles of litharge have entirely disappeared. During the cooking process a few more ounces of water are to be added, from time to time, so that, when completed, water still remains in the vessel. The mixture is to be stirred until cool. The ointment is difficult to prepare and requires skillful manipulation. When properly made it should be of a light yellowish-gray color, and of the consistency of butter. To ensure a good article it is essential that the very best olive oil and the finest litharge be employed."

To this I would add that the physician should examine each lot as made up, when this is possible, and he should in all cases decline to employ any ointment which has been on hand over a week. Although one of the most perfectly soothing and sedative of all ointments, *unguentum diachylon* is probably more apt to be ill-made or decomposed when dispensed, than any other, and it behooves the physician to look carefully after his prescription if he desires to avoid a possible catastrophe to his reputation.

must be pure and of good quality; the peanut oil often supplied in its place is irritating, I think. I may also remark, that while glycerine in full strength disagrees with many skins, yet, where diluted with one to three parts of water, it will almost invariably be found to agree.

In papular eczema, the eruption being more discrete and scattered, the applications to be made must differ somewhat in form from those employed in vesicular eczema. Lotions are usually preferable, and in many cases, where the individual lesions are widely separated, these alone are admissible. Then, too, the inflammation is of a different character, and pursues, as a rule, a more chronic course. Soothing applications, therefore, do not often come into use, and we are more apt to have recourse to stimulant remedies, as the so-called anti-pruritics, and chiefly tar and its derivatives. Carbolic acid is the most important and generally useful of these remedies, and the one most apt to do good in papular eczema. The formulæ given just above will be suitable for many cases, only substituting water for the *lotio nigra*, and increasing the proportion of the carbolic acid when the skin will bear it.

A further account of the treatment to be employed in acute eczema will be found under the head of the treatment of eczema attacking particular regions of the body.

Chronic Eczema.—In some cases the treatment employed in the acute stage of eczema may also be made use of in the chronic condition of the affection; more frequently, however, other and more stimulating remedies will be found more serviceable.

Carbolic acid may be employed, either in the form of a lotion, as above, or as an ointment, of the strength of five to twenty grains to the ounce of oxide of zinc ointment, benzoated lard or vaseline. It may be relied upon as an antipruritic remedy when all others fail, and is a most valuable application in chronic eczema. Thymol, in the

form of an ointment or lotion, in the strength of five to twenty grains to the ounce, is recommended by some writers. I have had very little experience with it. Tar and its preparations come largely into use in the treatment of chronic eczema. The tarry preparations must be handled with care, however, for, if used injudiciously, or in too great strength, they are apt to inflame the skin and retard the process of cure. They are most apt to be useful when the disease has completely reached the chronic stage, and when there is more or less infiltration. In using tar in the form of ointment, which is ordinarily the most convenient form of employing this remedy, its strength should at first rarely exceed one to two drachms to the ounce. It can be increased later, if the skin requires and will bear increased stimulation. The two forms of tar commonly employed are the *pix liquida* of the *Pharmacopœia* and the *oleum cadini*. Their effect upon the skin is apparently identical. A very convenient formula is the following :—

R.	<i>Ol. cadini</i> ,	$\overline{3}^{\text{ss}}$	
	<i>Ung. aquæ rosæ</i> ,	$\overline{3}^{\text{j}}$	M.

On the scalp, fluid or semi-fluid preparations are usually more convenient than ointment; the following formula is recommended by Duhring :—

R.	<i>Picis liquidæ</i> ,	$\overline{3}^{\text{j}}$	
	<i>Glycerinæ</i> ,	$\text{f}\overline{3}^{\text{j}}$	
	<i>Alcoholis</i> ,	$\text{f}\overline{3}^{\text{vj}}$	
	<i>Ol. amygdalæ amaræ</i> ,	℥^{xv}	M.

I often use the oil of cade mixed with three or four parts of alcohol or of oil of almonds, as an application in some forms of eczema of the scalp. These preparations are not to be smeared on the surface, or applied on cloths, as the soothing remedies. Much of their efficacy depends upon their proper and thorough application; they must be worked into the skin, in order to produce their full effect; patients and attendants should be especially instructed on

this point. In thick old patches of chronic disease, the following preparation may be thoroughly rubbed in by means of a little mop of rag or candlewick tied to the end of a stick :—

R. Picis liquidæ,
Saponis viridis,
Alcoholis, aa ʒ ij. M.

This preparation is known under the name of “tinctura saponis cum pice.” To produce a stronger impression, caustic potash may be used instead of the soap, in the proportion of five to fifteen grains to each ounce of the mixture. The following preparation, known as “liquor picis alkalinus,” was introduced to the notice of the profession by Dr. Bulkley :—

R. Picis liquidæ, ʒ ij
Potassæ causticæ, ʒ j
Aquæ, f ʒ v. M.

The potash is to be dissolved in the water, and gradually added to the tar with rubbing in a mortar. Of course, this preparation is much too strong to be used undiluted, excepting in the rarest cases. As a lotion, it may be diluted with from eight or more parts of water at first, down to two parts after a little trial; care should be taken not to make the lotion too strong at first. The liquor picis alkalinus may also be combined with ointment, from one to two drachms to the ounce.

Soaps play an important part in the treatment of some forms of eczema. In ordinary cases, plain white castile soap is all that is required for cleansing purposes; and the less soap that is used beyond what is necessary for this purpose the better, as a general thing. Strong alkaline soaps are used in eczema for this remedial effect, being particularly employed when some infiltration is to be removed, or when a stubborn and rebellious local patch of disease requires strong stimulation. Of these, the most generally

useful is that known as "Hebra's soap," "green soap," or, as it has been called in other parts of this work, "*sapo viridis*," a strongly alkaline potash soap. (See *Sapo viridis*.) It may be employed alone or in the form of an alcoholic solution, known as "*spiritus saponis kalini*:"—

R.	<i>Saponis viridis</i> ,	℥ij	
	<i>Alcoholis</i> ,	f℥j.	M.

Dissolve with the aid of heat, and filter.

It may be scented with lavender or other perfume if desired. This wash is very useful also for cleansing patches of eczema when covered with accumulated crusts and scales.

Under ordinary circumstances, and unless left in contact with the skin with a particular object in view, these stronger soaps should be washed off at once, and some oleaginous or fatty substance applied. Much mischief is sometimes done by allowing caustic soaps to remain in contact with the skin. Some years ago, when *sapo viridis* first came into vogue, I saw case after case in which this alkali had been applied without knowledge or thought of its properties, as if it had been an ointment, that is, smeared on the inflamed skin and allowed to remain, to the great detriment of the patient.

Sapo viridis is particularly useful in extensive infiltrated eczema rubrum of the leg and other parts. It should be well rubbed into the affected patches, by means of a flannel rag, until considerable smarting, abundant serous discharge, and, perhaps, slight bleeding are induced. The soap is then to be completely washed off with pure hot water, the patch of disease lightly dried with a soft cloth, and some soothing ointment, by far most preferably unguentum diachyli, is applied, spread upon strips of cloth. This process is repeated once, or sometimes even twice, daily, and when it can be properly carried out is a rapid and efficient method of dealing with this form of eczema. In old, infiltrated

patches of eczema, and in eczema of the palms particularly, solutions of caustic potash, ten to forty grains, or even a drachm, to the ounce, may be employed to advantage. The stronger of these must be used by the physician himself, and may not with safety be entrusted to the patient or to his attendants. The application should be made with a little mop tied to a stick, or occasionally with a bit of wood. The parts should be immediately bathed with cold water, or covered with cold-water compresses, and after a short time a soothing ointment may be applied. This procedure reduces infiltration and stops itching very effectually, but it is a sharp weapon, and not to be used rashly. Pushed too far, there is danger of causing local sloughing, with subsequent scars. It should not be used more than once or twice a week under ordinary circumstances.

Other remedies for the chronic forms and stages of eczema may be mentioned, as follows: Mercurial preparations are particularly valuable, especially when the disease is confined to a small area. When covering a considerable surface, mercurials should be used with care, or not at all, both on account of the fear of over-stimulation and for fear of absorption with resultant salivation. Calomel is the most generally useful of mercurial preparations; it may be employed according to the following formula:—

R.	Hydrarg. chloridi miti,	gr. x-xxx	
	Ung. zinci oxidi,		
	Ung. petrolii,	aa	℥ ss. M.

The red oxide of mercury in ointment, of the strength of five to thirty grains to the ounce, is also often very useful; it constitutes a chief ingredient, I believe, in some of the best known quack "tetter" ointments. Somewhat milder is the ointment of ammoniated mercury, which may be employed in somewhat less proportionate strength to advantage in the pustular eczemas of children. Sulphur is

also a highly useful application in some forms of eczema, particularly when there is a moist surface, or when its "cornifying" influence is required to regenerate the horny epithelium of the skin. It may be used in the form of ointment, of the strength of one to two drachms to the ounce of cold cream, in chronic eczema rubrum, occurring in patches; also, occasionally, in chronic pustular eczema, particularly about the hands. It should usually be used in a mild strength at first, and after a few days' use should generally be substituted, for a time at least, by some other preparation. A combination of the officinal tar and sulphur ointments sometimes acts happily in old chronic eczemas with much itching and infiltration. Boric and salicylic acids have been highly recommended by authors of repute during the past few years. "Lassar's paste," containing salicylic acid, is a very excellent preparation, but, like the boric acid solution, is perhaps better fitted for employment in the acute than in the chronic forms of eczema. It will come into use very conveniently in that class of cases where ointments are indicated, but where there is some idiosyncrasy which precludes their use:—

R.	Acidi salicylici,	gr. x	
	Pulvis zinci oxidi,		
	Pulvis amyli, āā	ʒ ij	
	Vaselini,	ʒ iv	M.

This is an excellent ointment for use in hot weather. In winter it is a little stiff, and I think the proportion of starch might conveniently be reduced for cold weather.

Some dermatologists employ gelatins in these forms of eczema. I give two formulæ, as follows:—

Pick's gelatin:—

Gelatin,	15 parts
P. zinci oxidi,	10 "
Glycerinæ,	30 "
Aquæ,	40 "

Gradually heat the ingredients as above until thoroughly incorporated.

Jameson's gelatin :—

Gelatin.,	15 parts
P. zinci oxidi,	10 "
Adipis,	10 "
Glycerinæ,	65 "

These are heated together over a water bath, and two-per-cent. salicylic acid added.

The gelatins are melted at a low temperature and applied with a brush. They have the advantage of neatness and occlusion, and save the use of bandages. I have found them somewhat inconvenient in application, though they may be of advantage in hospital and dispensary practice.

Another formula frequently employed is Ihle's ointment :—

R.	Resorcin,	gr. x	
	Lanolin,		
	Vaselín,		
	Pulv. zinci oxidi,		
	Pulv. amyli, āā	3 ij.	M.

A few years ago Mr. Squire, of London, brought forward the preparation known as glycerole of the subacetate of lead as a remedy in chronic eczema. His formula is as follows: Acetate of lead, 5 parts; litharge, $3\frac{1}{3}$ parts; glycerine, 20 parts, by weight. Mix and expose to a temperature of 350° F., and filter through a hot water funnel. The clear viscid fluid resultant contains 129 grains of the subacetate of lead to the ounce. This is used as a stock, from which the preparations employed are made by dilution with simple glycerine. I have used this preparation quite extensively in the treatment of chronic eczema rubrum of the legs, particularly when the disease is extensive, of a dusky red hue, accompanied by weeping, œdema, and a varicose condition of the veins. Also in eczema of the palms and soles. In eczema of the legs the glycerole stock may be used diluted with three parts of pure glycerine. Strips of linen soaked in this preparation are applied

to the affected limb and covered with wax paper and a bandage, the dressing being changed once or sometimes twice daily. This method of treatment may be employed to advantage in many cases when the treatment by means of *sapo viridis* and *unguentum diachyli* cannot be carried out. In eczema of the palms and soles the following ointment gives good results:—

R.	Glycerol. plumbi subacetatis,	f 3 ss	
	Glycerinæ,	f 3 iss	
	Ung. aquæ rosæ,	3 j	
	Ceræ albæ,	q. s.	M.

This is to be made into a tolerably firm ointment, and applied to the affected parts. It is better to precede its use with the application of solutions of caustic potash, and it should be spread thickly upon narrow strips of linen, and placed in close apposition to the affected parts, being covered with wax paper to prevent soiling.

For obstinate, circumscribed patches of eczema, blistering with cantharidal collodion will sometimes be found beneficial. With the same object, strong solutions of carbolic acid in alcohol, tincture of iodine, and solutions of nitrate of silver, or even the solid stick, may be employed. Vulcanized india rubber has been used extensively in the treatment of eczema, and may be employed with advantage, both as a protective against atmospheric influences, as a preparative for other applications, and as a direct therapeutic agent. In the form of Martin's solid rubber bandage, it is of great use in varicose eczema rubrum of the leg. It is apt to give rise to great itching, and even pain, when applied continuously upon the lower limbs, and for this reason it is well to have the bandage applied in the morning on rising, and to be worn during the day only. On retiring at night, the bandage is to be removed, and the limb plunged quickly into water as hot as can be borne. Removed from this in a few moments, it is wiped

gently dry and the surface dusted with starch powder, and loosely covered with linen cloth for the night. If the itching is very severe, a carbolic acid lotion may be substituted for the powder. Under this treatment rapid improvement is usually observed, and sometimes no further treatment is required. Rubber cloth in sheets, rubber masks and finger-stalls, are also often employed in the various forms of eczema with advantage. In severe or extreme cases of eczema, furuncles often occur as a sequel, due to the implantation of the *staphylococcus pyogenes* by scratching and rubbing at a time when the system is impaired. To prevent the occurrence of these furuncles, some parasiticide, as thymol, carbolic acid, resorcin, or sulphur, should be added to whatever ointment is employed toward the end of the treatment. Unna thinks that the addition of one or two parts of corrosive sublimate per thousand of oxide of zinc ointment is the surest preventive of post-eczematous furunculosis.

Having now spoken of the acute and chronic forms of eczema in general, it will be advantageous to next consider this disease as it is met with in different localities.

Universal Eczema is very rare; when it does occur it is usually erythematous or squamous. Its history in these cases will serve to bring out one or another of the points mentioned in discussing the general diagnosis of the disease, and so lead to its identification.

Eczema of the Scalp.*—This is usually erythematous, vesicular, or pustular. The first variety rapidly runs into the squamous, the scalp being more or less covered with red, scaly patches, which are very itchy. The pustular variety is common among children. The pustules commonly come out in great numbers about the hair follicles.

* *Pityriasis capitis*, *seborrhœa sicca capitis*, or *eczema seborrhœicum capitis*, are practically interchangeable.

They soon rupture, and the liquid, oozing over the skin, forms yellowish-green crusts, sometimes amounting to thick masses. The hair becomes matted and caked; the scalp, if not cleansed, gives out a very offensive odor; and the disease, unless checked by proper treatment, may last from a few weeks even to years. The itching is usually not so decided in this as in other forms of eczema. Sympathetic enlargement of the lymphatic glands about the back of the neck and behind the ears is common in this form of eczema, and, in the case of children, often gives rise to great anxiety on the part of parents. The glands never suppurate, and the patient's friends may be assured, with confidence, that, as the irritation and inflammation about the scalp subside, the glandular engorgement will spontaneously disappear. Small abscesses often complicate the eczema of the scalp in unhealthy children. Pediculi also are very frequently present, and the scalp should be examined for the insects or their nits in all cases of supposed pustular eczema, because, in reality, the affection may be a dermatitis superinduced by the irritation of the psoriculus capitis. A patch of pustular eczema occurring in the occipital region, especially in neglected and ill-nourished children, almost invariably points to the presence of pediculi as a cause. When present, they should at once be removed by the means described under *Pediculosis capitis*.

Eczema of the scalp may be confounded with psoriasis, seborrhœa, favus, syphilis, and tinea tonsurans. From psoriasis of the head eczema may be distinguished by the symptoms mentioned in the general diagnosis of the disease. Pityriasis sometimes resembles eczema capitis very closely, but the pearly color of the scales and the not unfrequent combination of more or less seborrhœa with the pityriasis, making the scales greasy, as also its diffusion, and the history of the case, are important elements in dis-

tinguishing eczema from this disease.* Other points have been touched upon earlier. Pustular eczema alone is likely to be mistaken for favus, but the mustard or canary color of the favus crusts, their commonly cup-shaped outline, and the dry, pulverulent consistence of the masses of fungus, together with the microscopic appearance, will be sufficient to distinguish it from eczema. As before mentioned, certain syphilitic diseases of the scalp may be mistaken for eczema. The history of the case, with the characteristic symptoms above given, are ordinarily sufficiently distinctive. Erythematous or squamous eczema may sometimes be mistaken for tinea tonsurans. The patches of eczema, however, are not attended with loss of hair. In ringworm of the scalp the hairs are broken off uniformly about an eighth or a quarter of an inch beyond the scalp. The hair has a nibbled appearance. The patches in ringworm are apt to be roundish in outline. In eczema they are irregular. The color of the scalp is of a leaden hue; while in eczema it is reddish, and has more the appearance of inflammation. The itching in eczema is marked. In tinea tonsurans it is slight. A history of contagion is frequently found in connection with tinea tonsurans.

The treatment of eczema capitis will, of course, depend upon the variety and stage of the affection in each case. In pustular eczema the crusts must first be removed by means of hot water and soap, preceded, if necessary, by thorough saturation with olive or almond oil, to soften and loosen the crusts. Sometimes the scalp must be well saturated with oil and covered with a cap over night; and perhaps the process must be repeated; at all events, the crusts must be removed before any applications are made. Occasionally the oil alone appears to exert a curative influence, but usually more decided treatment is required. The hair

* See *Eczema seborrhæicum*.

in children, boys, and men may be cut short, especially when lice are present. In women this sacrifice is not necessary, and should not be permitted. Now and then, however, we meet cases where women are suffering with severe and neglected eczema due to pediculosis of long standing, and where the hairs are so matted and glued together that we are obliged to have recourse to the scissors.

As to medicinal applications: in inflammatory cases, black wash or one of the carbolic acid lotions may be applied with a sponge or cloth for ten or fifteen minutes at a time, morning and evening, and these may be followed each time by an oily preparation. If ointments can be used, the following are of value:—

R. Bismuthi subnitrat., $\bar{3}j$
Unguent. petrolii, $\bar{3}j$. M.

Or this:—

R. Hydrarg. ammoniat., gr. x-xx
Unguent. petrolii, $\bar{3}j$. M.

The following is somewhat more stimulating. It appears to have a drying effect when there is discharge:—

R. Hydrarg. chlor. mite, gr. xx-xl
Unguent. petrolii, $\bar{3}j$. M.

A small portion only should be applied at once, but this should be rubbed in thoroughly. When a stimulant effect is desired, an ointment of the red oxide of mercury, ten to twenty grains to the ounce, may be employed. The ammoniated mercury ointment is particularly useful in cases where the eczema is due to the presence of lice.

When still stronger stimulation is required, especially when exudation has ceased, and the scalp is red and scaly, one of the following ointments may be employed:—

R. Ung. hydrarg. nitrat., $\bar{3}j$ -iv
Ung. petrolii, $\bar{3}iv$. M.

Or,

R. Picis liquidæ, $\bar{3}j$
Vasellini, $\bar{3}j$. M.

As these cannot be applied when the hair is long, a fluid preparation must be employed:—

R. Ol. cadini, f℥ss ad f℥j
 Ol. amygdalæ, ad . . . f℥j. M.

Alcohol may be substituted for the oil when the hair is quite thick. In some cases, when there is scaly eczema of the scalp with some tendency to greasiness, and the occurrence of seborrhœa, the following ointment acts happily:—

R. Acidi tannici, ℥j
 Ung. petrolii, ℥j. M.

When the hair is long, glycerine and alcohol in equal proportions may be substituted for the vaseline.

Eczema of the Face.—This form of eczema is more apt to be met with in children (see *Eczema infantile*), but is also found in adults, on the cheeks and elsewhere. The form of eczema found in adults is usually the erythematous, on the cheeks, nose, forehead, and sometimes extending around to the ears and down the neck. The skin becomes bright or dusky red, with intense burning and some itching. It becomes thickened, infiltrated, and stiff, with some scaliness. This form of eczema is more apt to occur in winter and among persons exposed to cold and wind. In addition to such general means of treatment as are called for by the patient's condition, active local measures should be used. Lead-water lotions are valuable in the acute stage, and also black wash. Black wash should be sopped on the skin, or laid on by means of rags saturated with it, and renewed hourly. This may be followed by an ointment, especially if the patient must move about and cannot keep the wash in contact.

Oxide of zinc ointment with equal part of vaseline may be employed, or "Lassar's paste" in some cases.

In order to protect the skin from cold air, which is poi-

sonous when the skin is in this condition, I am accustomed to recommend the use of the following paste:—

R.	Tragacanth,		
	Glycerinæ,	aa . . .	℥ iv
	Sodii biborat.,		℥ ss
	Aquæ destillat.,		q. s.
			M.

With these materials, a thin, adherent, quickly drying paste may be made, with which the skin of the face may be painted just before going out of doors. This is almost or quite invisible, and yet acts as a perfect protective. On returning home it may be washed off readily with a little warm water, and then the lotions and ointments may be applied. This is worth remembering, because not every one can stay at home, day after day, and keep applications constantly to his face, and it is well to be prepared with some such alternative, which if it does little good yet prevents much harm to the skin.

As soon as possible the soothing applications should be changed for lotions and ointments containing tar and carbolic acid. The carbolic acid wash may be tried even when the eruption is at its height, being more apt to be useful if itching, rather than burning, should be the prominent symptom. The following formula is a good one:—

R.	Acid carbolic,		℥ iij
	Glycerinæ,		℥ j
	Lotio nigra,		Oj.
			M.

Water may be substituted for the lotio nigra.

The proportion of carbolic acid may be increased or diminished as the case requires. There is a proprietary solution of coal tar which is known as “liquor carbonis detergens,” and which is miscible with water, which is an excellent lotion for use in this form of eczema; it should be employed in the proportion of one part to eight of water or stronger.

It is closely imitated in the following formula:—

R. Picis mineralis, ℥ ij
Alcoholis, f ℥ ij.

Strain, and add

Liq. ammoniæ fort., ℥ viij
Glycerinæ, f ℥ vj
Aquæ destillatæ, ad f ℥ xij. M.

The following combinations may be suggested:—

R. Liq. carbonis detergens, f ℥ ij
Liq. plumbi sub. acetat. dil., f ℥ ij
Aquæ rosæ, ad Oss.

Or,

R. Liq. carbonis detergens, f ℥ ij
Pulv. zinci carb. præcip., ℥ v
Pulv. zinci oxidî, ℥ iv
Glycerinæ, f ℥ j
Aquæ rosæ, ad Oss.

When ointments are borne, the following is useful in very many cases. I almost always try it before using other preparations:—

R. Picis liquidæ, ℥ ss-℥ ij
Ung. aquæ rosæ, ℥ j. M.

Now and then fissures and cracks form in the infiltrated skin, especially about the alæ nasi. The following pigment is very efficient in healing these, and may often be used as a protective over other parts of the face, where there is no objection to the discoloration:—

R. Ol. cadini, ℥ j
Liq. gutta perchæ, seu collodii, ℥ j. M.

Let a brush be put in the cork, and let the patient paint the skin over several times a day. This pigment has the advantage over ointments that it cannot be rubbed off.

Another excellent ointment in erythematous eczema of the face is this:—

R. Ung. hydrarg. nitrat.,
Olei cadini, aa ℥ j
Pulv. zinci oxid., ℥ ss
Ung. aquæ rosæ, ad ℥ j
Ol. rosæ, q. s. M.

Eczema of the Lips is ordinarily accompanied by swelling, redness, heat, infiltration, slight scaliness, and fissures. The muco-cutaneous surface of the skin outside may be attacked, and the symptoms and treatment differ according to the seat of the eczema. Eczema of the lips is to be distinguished from herpes and syphilis. Herpes runs a distinct, short course, and is composed of discrete, well-marked vesicles or groups of vesicles. Eczema is more obstinate, and covers a larger surface. Syphilis occurring about the mouth usually either assumes the form of circumscribed, more or less irregular erosions on the inside of the lip, or else is seen localized in the angles of the mouth, forming a more or less deep fissure and secreting a puriform fluid. Eczema of the lips, especially when occurring on the muco-cutaneous surface, is difficult and painful to treat. Solution of potassa, twenty grains to the ounce, is of use when there is infiltration. The muco-cutaneous surface should be carefully dried before it is applied, and afterward, to prevent running. Ordinarily, milder preparations are best. The following is a useful combination :—

R.	Acidi phosphorici, dil.,	
	Glycerinæ,	
	Syrupi, aa	f ʒ ss. M.

SIG.—Apply to parts three times daily.

The same formula, with the addition of enough water to make six ounces, may be given simultaneously in teaspoonful doses thrice daily. When a dry, wrinkled, scaly condition exists, G. H. Fox suggests the use of an ointment containing five grains of thymol to the ounce of cold cream.

When the outer edge of the lip is affected, the following ointment is useful :—

R.	Zinci oxidi,	
	Mellitis, aa	ʒ ij
	Olei amygdalæ,	ʒ vj
	Ceræ flavæ,	ʒ ij. M.

In winter a condition analogous to eczema produces annoying fissures of the lip, which may be treated by moistening the fissure and applying a pointed stick of nitrate of silver. Afterward the compound tincture of benzoin may be painted on as a protective. Another procedure in chronic cases is to forcibly tear open the crack a short distance and then rub in, by means of a bit of stick, a minute quantity of strong red oxide of mercury ointment (forty to sixty grains to the drachm).

There is a form of eczema occurring on the upper lip, about the opening of the nostril. This has been considered under eczema of the nares.

Eczema of the Eyelids often occurs in scrofulous and badly-nourished children, and less frequently among adults also. The follicles of the eyelashes are involved, small pustules forming, which dry into crusts, gluing the edges of the lids together. These are usually more or less red and swollen. Conjunctivitis may or may not be present. The treatment varies, according to the severity of the case. Mild cases require no more than the application of a weak nitrate of mercury ointment, made of the officinal ointment diluted with three to six parts of cold cream, or an ointment of ten grains of red oxide of mercury to the ounce of cold cream. In severe cases the eyelashes should be extracted, the edges of the lids carefully dried and then touched with a camel's-hair pencil moistened with a drop of a ten-grain-to-the-ounce solution of caustic potassa. This application is to be wiped away immediately and the effect neutralized by the application of cold water. The operation may be repeated every day until the infiltration, exudation, and itching subside, after which one of the stimulating ointments just mentioned may be used to complete the cure; or as suggested to me by Dr. Risley, a small portion of the following ointment, known as "Pagenstecher's ointment," may be applied on the inside of the lower lid with a spatula

and gently worked over the insides of the closed lids with the aid of the finger :—

R.	Hydrarg. oxid. flav.,	gr. j	
	Vaselini,	ʒj.	M.

Eczema of the *nares* deserves special mention. Hardaway points out that we have two distinct clinical and pathological conditions in many cases, eczema and inflammation of the follicles of the vibrissæ, which latter is in effect a folliculitis barbæ, or coccogenic sycosis, and to which the name *Eczema sycosiforme* is sometimes given. When simple eczema of the nares exists, a similar inflammation is not unfrequently present in the upper portion of the nasal passages, and this complicates the condition, which is apt to be stubborn to treatment. The mucous membrane of the nasal passages is in its upper portion, so far as the unaided vision can reach, dry, red, and glazed. Near the nasal orifice excoriations and even shallow ulcers are sometimes met with, and the passages are apt to be clogged up with dried crusts. Children, particularly strumous and ill-nourished infants, are most commonly the subjects of this form of eczema, which is to be carefully distinguished from syphilitic nasal disease, both by the history of the patient, the absence of concomitant syphilitic eruptions, or other symptoms, and the fact that the disease is always more superficial in eczema, erosions, if present, being shallow and secreting serum and mucus rather than pus.

The local treatment of this form of eczema consists in first softening any crusts which may obstruct the nostrils, by painting with a soft camel's-hair brush, or dropping into the nostril warmed olive or almond oil. When the crusts are thoroughly softened, they can easily be removed, but no force must be used. The orifices are then gently anointed with some soothing or slightly stimulant and astringent ointment, as the McCall Anderson's bismuth ointment.

When the vibrissæ are affected, a sort of furuncle may arise just within the nares, accompanied by intense pain and tension, and usually resulting in resolution without suppuration. The parts being rigid, there is no room for extension of the inflammatory process. The outside integument of the nose often becomes red and subsequently desquamates.

The disease process may run its course in a few days, or, by the extension of the inflammation to new follicles, may drag on over several months. Sometimes one is consulted rather for the redness of the nose than for the actual disease in chronic cases.

The affection appears to attack persons who have become worn out by fatigue, mental strain, or worry. Although not strictly speaking an eczema in this form, yet it is so closely connected with the eczematous inflammation as to deserve mention here. Any discharge from the nostrils must be treated as an indispensable preliminary to the cure of the skin affection.

Hardaway recommends cod-liver oil emulsion internally, preceded, in some cases, by the sulphide of calcium, in one-tenth grain doses every three hours. Locally, one part of glycerine to two parts of Squires' glycerole of the sub-acetate of lead applied freely, by means of a camel's-hair pencil, to the inside and outside of the nose. Fomentations of water as hot as can be borne may be applied several times daily, and the hairs should be plucked from the inflamed follicles. When the disease spreads down on the upper lip, the sulphur and magnesia mixture given under sycosis is usually the very best treatment. Local depletion may be required. Later, Hardaway suggests the ointment of the glycerole of lead. In severe, long-continued cases, where relapses are common, the hair papillæ may be destroyed by electrolysis.

Eczema of the Beard is sometimes excessively stubborn

and annoying. Pustules, usually seated about the hairs, form with great rapidity and persistence, and are followed by yellowish or greenish crusts, often matting the hairs together. Usually the affection is confined to a limited locality, as the corner of the upper lip, near the commissure, or just at the beginning of the nostrils; but occasionally the whole beard may be involved, and the disease may extend to other parts of the face. In this respect the affection differs from sycosis (see *Sycosis*), which is always limited to the hair follicles. The latter is also a deep process involving the follicles themselves, while eczema barbæ is essentially superficial, occupying the surface of the skin alone, and taking in the hair follicles only incidentally. Papules and tubercles, not uncommon in sycosis, are absent in eczema barbæ. The two affections do, however, often resemble one another very closely.

Hyphogenic sycosis (see *Sycosis hyphogenica*) is sometimes mistaken for eczema barbæ; it is important to distinguish between the two diseases. Crusts are generally abundant in eczema; in this form of sycosis they are generally (though not always) scanty. When the crusts are removed the eczematous surface is smooth, while in sycosis it is rough, uneven, tubercular, and lumpy—a very important point. The hairs in eczema are usually firm in their follicles, and the attempt to remove them causes pain, even when there is a good deal of suppuration about the root. In tinea sycosis, on the other hand, the hairs come away without the least pain or difficulty; they are often crooked, but are usually quite smooth and dry, while the hairs of eczema are surrounded by the glutinous root sheath. Above all, the hairs in sycosis almost invariably contain the characteristic fungus (see *Sycosis*); besides which, the source of contagion in this highly contagious disease can frequently be traced out. Finally, patches of characteristic ringworm not unfrequently can be seen on

the neighboring skin. As regards sycosis coccogenica, this form of eczema frequently results in the invasion of the hair follicles by the staphylococcus which is usually present (see *Sycosis coccogenica*).

The treatment of eczema of the beard should be prompt and energetic. The crusts must first be removed with oil or poultices, followed by soap and warm water, and then the beard must be carefully shaved. This is a painful operation when first performed, and patients often rebel against it. It is well to be firm, however, and it is sometimes unsafe to take the responsibility of a case unless the patient complies with these directions. After the first time, shaving is much less painful, and patients do not object. Ointments and applications cannot be brought into intimate contact with the surface when there are hairs growing upon it. In the acute stage, the treatment by *sapo viridis* and *unguentum diachyli*, as described under the general treatment of eczema, is best. Later, a weak sulphur ointment, of one drachm to the ounce, or the sulphur and tragacanth wash (see *Acne*), may be employed.

Eczema of the Ears may occur in any form, and may involve either the outside or the meatus. In the acute forms and stages the ears are red and swollen, and they burn and itch severely. The disease, when it involves the meatus, may cause temporary deafness from occlusion by large and abundant epidermic flakes and scales. Ointments, as a rule, are most useful in eczema of the ears, though in the acute vesicular form, black wash, or the other washes, may first be employed, as in the general treatment of acute eczema. When there is a deep crack behind the ear, of long standing, *sapo viridis* may be briskly rubbed in, followed by an ointment containing tar or calomel, a drachm to the ounce. This is a good combination:—

R.	<i>Picis liquidæ</i> ,	℥j	
	<i>Ung. zinci oxidi</i> ,	℥j.	M.

Or calomel may be added to this formula. When the meatus is involved, ointments, etc., being used, the opening may become gradually clogged with débris, and deafness, often quite alarming to the patient, may result. In these cases the meatus is to be carefully syringed out with warm water, containing a little borax, sodium carbonate, or common salt, in order to remove all the wax, epithelium, grease, etc. Oil of sweet almonds may be dropped into the meatus first, to soften the mass. Care must be taken in these manipulations, and especially in making applications, not to injure the membrana tympani. The crusts being removed, and the meatus gently dried, the affected parts may be touched with a solution of nitrate of silver, two to three grains to the ounce, and dry charpie applied, or if there is much oozing, cold cream in small quantity. If the skin is infiltrated, a solution of potassa, ten grains to the ounce, may be applied by means of a camel's-hair pencil, carefully stripped before introduction, so as not to leave a drop which may run down to the tympanic membrane. These applications may be made every day or two, and as the acute symptoms pass off, an ointment of tannic acid, one drachm to the ounce, may be substituted for the cold cream. In the intervals of this treatment, which must be carried out by the physician, the patient may syringe the meatus out once or twice daily with the following solution :—

R.	Acid. carbolic. cryst.,		
	Zinci sulphat.,	. . . . . aa	gr. xij
	Glycerinæ,	. . . . .	f $\frac{3}{4}$ ij
	Aque rose,	. . . . . ad	f $\frac{3}{4}$ xij.
			M.

Eczema occurring about the ears, and particularly in the meatus, is apt to be stubborn.

Eczema of the Genitals is one of the most painful and distressing forms of the disease. In the male, the penis or the scrotum alone may be involved, or both together. The

latter is more commonly the seat of the disease, and the tissues of the skin here become greatly thickened, swollen, and infiltrated. Moisture, crusts, and painful fissures along the folds of the skin are often present. Itching is a severe and prominent symptom, and the disease is apt to be very chronic. In the female the labia and even the vagina may be invaded. The affection here is even more distressing than in the male. Itching is violent and causes extreme misery. The diagnosis is not difficult. Pruritus alone is apt to be mistaken for eczema of the genitals, and here the absence of visible primary lesions will decide the character of the case. The itching comes first in pruritus, and then the skin is torn and bleeding, from the scratching.

Sometimes eczema of the genitals yields quickly to treatment; this is when it is recent and superficial; chronic eczema with thickening and infiltration is often obstinate to an extreme degree.*

In the acute and superficial form, simple or medicated warm baths are often grateful and give much relief. The following is a fair sample of the method of making up these baths:—

R.	Potassii carbonat.,	℥ iv	
	Sodii carbonat.,	℥ ij	
	Pulv. boracis,	℥ ij.	M.

Dissolve in a quart or so of water; add four to six ounces of dry starch, placed beneath the water in the hand, which is then opened and beaten through. Six to eight ounces of glycerine may then be added if thought desirable, and the whole mixed in with about thirty gallons of hot water in a long bath tub. The patient remains in the bath for fifteen to twenty minutes. On coming out the parts are to be carefully dried without rubbing, and then at once

* Diabetes should be suspected in severe cases of eczema of the genitals, and the urine should be examined. (See *Diabetes, Skin Diseases in.*)

thickly dusted with powdered subnitrate of bismuth, or wrapped up in an ointment composed of one part of cod-liver oil to two parts of suet.

When baths cannot be taken, or even when these are employed, it will often be found advantageous to use lotions of lead water or black wash, or the fluid extract of *grindelia robusta*, two drachms in a pint of water. If the patient is obliged to go about his work or business, it will be well, if he be a man, that the part be wrapped or supported in fine linen wrappings to protect it. One of the various dusting powders, as nitrate of bismuth, *lycopodium*, *magnesia*, etc., may be dusted on, or if powders are found too drying, a little vaseline may be smeared over the surface. In both men and women it is important to keep adjacent parts separate from one another, as the heat and moisture engendered infallibly make the disease worse.

Where there is infiltration the treatment must be different. Whatever applications are made, however, will do more good if the parts are first bathed with water as hot as can be borne. The *sapo viridis* and *unguentum diachylon* treatment, described above, under the head of general treatment, is a most excellent method for use in chronic and indurated eczema of the genitals when it can be had. When there is considerable itching carbolic acid wash—acid carbolic, \mathfrak{z} ij; glycerine, \mathfrak{z} j; aquæ, Oj—is of advantage. It is particularly useful in eczema of the female genitals, and its application, which may be practiced at intervals of a few hours, should be preceded, when possible, by bathing with hot water. In eczema of the scrotum, when there is much itching, the following application may be employed:—

R.	Argenti nitrat.,	gr. x-xxx	
	Spiritus æth. nit.,	\mathfrak{z} j.	M.

This is to be painted on the parts, and will serve to protect them; if found too stiff, some ointment may be applied

as soon as the pigment is dry. Stimulating ointments, mercurial, tarry, etc., as given above, may be employed from time to time, as required, and one thing should be tried after another until relief is gained; for in this form of eczema, more than in any other, perhaps, the treatment must, of necessity, be largely empirical and tentative.

Eczema of the Anus is not very common—pruritus of this region being usually mistaken for this disease—but when it occurs, may cause much infiltration and fissuring, with not unfrequently involvement of the neighboring parts. It is very apt to result from a neglected pruritus of this part. (See *Pruritus ani*.) It usually assumes the erythematous form, and when fissure results great pain is experienced on defecation. On account of this, constipation from over-retention of the fæces is commonly present, with the effect of heightening the discomfort and pain caused by the passage of the stools. Itching and burning sensations, worse at night on going to bed, and in severe cases pain on defecation—these are the chief symptoms of eczema ani. The treatment is, in general, the same as that of infiltrated eczema in other localities. The parts should first be washed with ichthyol soap or with a mild sublimate soap. The following ointment may then be applied:—

R.	Acid boric,	3j	
	Cocaine hydrochlorate,	3j	
	Lanolin,	3j.	M.

Tar ointments in various proportions are very useful. The following formula gives the tar in the least offensive form possible, first applying a five per cent. solution of cocaine hydrochlorate to prevent undue pain:—

R.	Picis liquidæ,	3j	
	Medullæ bovis,	3vj	
	Ceræ albæ,	5j	
	Ol. rosæ,	℥v.	M.

Almond oil containing twenty per cent. carbolic acid forms a cleanly and not disagreeable application. It may

be rubbed in with the fingers every night on retiring. Even when the muco-cutaneous surface is abraded and fissured, this oil gives relief, while many applications pain severely. When there are deep fissures, these should be split open and touched with the nitrate of silver stick, the tar ointment being subsequently applied. The parts should be kept scrupulously clean, and the patient should be exhorted not to scrape and dig at the skin, but to fly to his ointment or oil when the attack comes on, and especially to keep these close at hand when undressing for the night. If there is any tendency to congestion and moisture about the nates and perineum, these should be powdered with starch or astringent powders. Aperients, by permitting the passage of the fæces in a softened condition, and also possibly by relieving the circulation in the hemorrhoidal veins, may often be of service. The astringent injection mentioned under *pruritus ani* is often of great service.

Eczema intertrigo resembles erythema intertrigo (see *Erythema intertrigo*), but shows the characteristics of eczema. The parts should be dusted frequently with astringent powders, kept from rubbing, if possible, by the interposition of lint or cloth, and rest, when possible, should be enjoined. Sometimes astringent lotions are useful.

Eczema of the Breasts may occur about the nipple or on the lower edge of the breasts. The former variety is often brought about or kept up by nursing. The diagnosis, especially from syphilis and from *Paget's Disease* (see *Paget's Disease of the Nipple*), which is very important, is to be made by exclusion. Eczema occurring in this locality shows the infiltration, redness, exudation, burning, itching, etc., characteristic of the affection. The *sapo viridis* and *unguentum diachylon* treatment, or that by solutions of caustic potassa, is the best when there is much infiltration. The treatment in every case should be decided and vigorous. When fissures of the nipple occur in

nursing women, leaden shields may be used and the cracks in the nipple moistened, touched with nitrate of silver stick (an excessively painful operation for the moment), and painted with compound tincture of benzoin. By this means cracks in the nipple can often be healed up while the child is nursing. When eczema occurs about the lower edge of the breast it generally takes on the form of eczema rubrum or eczema intertrigo, and is in part due to a pendulous condition of the mammæ. The usual treatment of lotions, black wash, astringent powders, and the interposition of lint or absorbent cotton will work a cure.

Eczema of the Umbilicus is usually moist and fissured. A disagreeable odor generally accompanies the affection in this locality, and there are scales and crusts. The disease is apt to be mistaken for syphilis if it occurs only in this locality, but in syphilis ulceration usually takes place, and the smell is more than disagreeable; it is positively offensive. The little pit should be kept thoroughly clean, and the diseased part should be painted every day or so with a solution of nitrate of silver four to ten grains to one ounce, and then the sides kept apart by dry cotton.

Eczema of the Legs is a very common form of the disease, especially among old people. The erythematous and vesicular varieties are commonest at the beginning, but these soon change to eczema rubrum or weeping eczema. The affection occurs in one or more patches of various size, the whole leg being not unfrequently involved. When it comes under notice it has generally lasted some time; the skin of the leg is smooth, shiny, dusky red or violaceous and unbroken; or it may be moist and weeping, or covered in part or wholly with scales and crusts. There is always a good deal of thickening and infiltration, with burning and itching to an extreme degree. Varicose veins often accompany this form of eczema, and varicose ulcers are not uncommon. Eczema rubrum sometimes occurs in

elephantiasis of the legs; here it is secondary to the other affection. The diagnosis of eczema of the leg is not difficult. Ulcers, when present, are to be distinguished from syphilitic ulcers. The treatment of eczema of the leg must vary with the nature of the case. In moist, weeping eczema the *sapo viridis* and *unguentum diachylon* treatment is the best when it can be carried out. Next to this is the treatment by means of glycerole of the subacetate of lead. Both forms of treatment have already been described. Of late I have used, with great satisfaction, a paste suggested by Unna. It is composed as follows:—

R.	Kaolin.,				
	Ol. lini. (seu glycerinæ),	. . .	āā . .	3vj	
	Pulv. zinci oxidī,				
	Liq. plumbi subacetat.,	. . . .	āā . .	3ss.	M.

This forms a thick, creamy liquid, which dries with tolerable rapidity on exposure to the air. It is best preserved in a bottle with a large brush in the cork. This prevents evaporation and permits the ready application of the remedy. A thick coating is painted on the skin and allowed to dry, which usually occurs in a few moments, or if it does not dry quickly enough a little powdered kaolin or starch may be dusted over the surface by means of a wisp of cotton. A bandage is then applied firmly from the toe to the knee, and the dressing allowed to remain in place for twenty-four hours. At the end of that time, the bandage being removed, the dried paste can be readily detached. When it sticks closely to the skin it is better not to tear it off, but to paint over the whole limb. This process is repeated daily, the area covered diminishing with the healing up of the disease, until, finally, pigmentation occurs. Ravogli uses, first a liniment of two-per-cent. ichthyol in a mixture of glycerin, almond oil, rose water, and lime water, applied on patent lint and covered with a layer of cotton. Subsequently he uses oxide of zinc ointment or diachylon ointment, containing six-per-cent. ichthyol.

An excellent treatment for chronic eczema rubrum of the leg, complicated, as this so often is, by ulcers, is the following:—

After cleansing the ulcer from all *débris*, secretion, etc., it is covered with powdered iodoform, aristol or euophen thickly dusted on. The whole area of eczema around the ulcer and extending to the entire limb if required, is then painted with the following:—

R.	Pulvis zinci oxidi,	3ij-3vj	
	Acidi salicylici,		
	Acidi carbolici,	āā	3ij
	Mucilaginis acaciæ,		
	Glycerinæ,	āā	3xx. M.

The proportion of oxide of zinc may be varied slightly so as to obtain the consistency of thick cream.

After the diseased skin has been well coated with this paint, a double-ended roller bandage is to be applied.

The bandage is to be thoroughly soaked in water and applied while still wet by its middle across the foot just below the instep, the ends being crossed and recrossed at every turn with a half twist. If carefully applied, this bandage may remain in place for several days, or even a week, without arousing any discomfort. It is, therefore, particularly suitable for dispensary patients, and those whose circumstances forbid a frequent visit to the physician.

Occasionally massage may be employed to stimulate the circulation in the diseased limb and to hasten the absorption of the products of inflammation. Before using this procedure, the surface should be disinfected by washing with some parasiticide soap, followed by a wash of 1 to 1000 corrosive sublimate or a saturated solution of boric acid in distilled water.

A long experience in this class of skin disease has taught me the importance of dressing such cases myself. Franklin used to say, "If you wish a thing done, *go*; if not, *send*." So, with regard to cases like this, if the physician wishes

the case properly attended to, let him if possible adopt some form of treatment which he himself can apply, rather than give a number of directions which are rarely carried out. The course of an eczema rubrum of the leg is chronic at best, but the cure may be accelerated to a marked degree by judicious management.

When enlarged or varicose veins occur in connection with eczema of the leg, particular pains must be taken to support the vessels and to give tone to the circulation. The patient should sit or lie with the limb in an elevated position, and should never permit it to hang down. Walking exercise may sometimes be taken in moderation with benefit, if the limb has been supported by an elastic stocking, or by one of Martin's rubber bandages. Bandages of one kind or another should always be employed in eczema of the leg, both to support the dressing properly, and, as has been said, to give tone to the vessels. Too much stress cannot be laid on the importance of attending to the condition of the circulation in eczema of the leg. The rubber bandage is particularly useful in a limited number of cases, especially when there are ulcers present. It should be applied directly to the limb, care being taken to exercise firm and even, but not too severe pressure. At night the bandage should be removed and cleansed and placed in carbolyzed water, from which it can be removed in the morning and dried previous to re-application. The leg should be dusted with starch and boric acid; or it may be bathed with hot water containing a little carbolic acid, if there is much itching, and then is to be dusted with boric acid and wrapped up loosely in a muslin bandage, or cloth, for the night. The rubber bandage must be used with caution, and the leg frequently examined by the physician. In careless hands it may do harm by cutting into the skin or by macerating.

Eczema of the Hands may attack either the back or the

palm. The appearance and course of the disease is so different, however, in one case or the other, that they must be considered separately. Eczema vesiculosum is the variety most common on the backs of the hands, and on the backs and sides of the fingers. Sometimes the pustular variety is found, and occasionally fissured eczema about the knuckles and pulps of the fingers. The vesicular form of eczema is not unlike that found in other localities, excepting that large blebs occasionally form. It may be acute or chronic, and in some cases the nails are also involved in the disease. It is apt to occur as the result of exposure to acids, alkalies, brick-dust, etc. The diagnosis between eczema and scabies of the backs and sides of the fingers and hands is sometimes difficult. In scabies the peculiar burrow of the itch insect, a short, irregularly curved, beaded, black line, a quarter of an inch in length, is often present, and the vesicles are few in number and scattered. In eczema, on the other hand, the vesicles are numerous and closely grouped. In scabies the vesicles are firm, and usually remain unruptured until they are opened by mechanical means. In eczema the vesicles usually rupture spontaneously, at an early period. The vesicles of scabies commonly exhibit through their summits a fine, dark, irregular line, made up of points, being the original burrow in the epidermis which has been raised by the formation of the vesicle. This is, of course, wanting in eczema. The occurrence of scabies elsewhere over the body will also assist in the diagnosis. Vesicular eczema of the backs of the hands may also be confounded with the rare disease known as dysidrosis or pompholyx. (See *Dysidrosis*.) Eczema of the backs of the hands, and particularly eczema of the fingers, is apt to be very intractable, sometimes recurring every year or oftener, at regular intervals. In the acuter forms of vesicular eczema of the backs of the hands, lotions, as black wash, and particularly a lotion of two to four grains of the sul-

phate of zinc to the ounce of water, are useful in the more chronic form of the disease. Stimulating ointments commonly answer the best purpose in the chronic form. When the case is chronic and not very extensive, the vesicles may be ruptured by an application of solution of caustic potassa, twenty to forty grains to the ounce, applied with a pointed stick, or brushed quickly over the surface and washed off. The application is to be followed by a soothing ointment. India rubber finger-stalls are sometimes employed with success. Fissures in the ends of the fingers should be painted with liquor gutta perchæ repeatedly for several days, and then allowed to remain untouched until the shell which forms peels off. Then a weak solution of caustic potassa may be used. The fingers being soaked for a few minutes and then dried, after which the solution of gutta percha is again to be applied. Eczema of the backs of the feet differ in no essential from eczema of the backs of the hands. It is less frequent, however, and when it occurs is apt to be less extensive and less rebellious to treatment.

Eczema of the Palms and Soles presents some peculiar features. Owing to the thickness of the epidermis in these localities, the appearance of the affection is somewhat marked. Infiltration, thickening, more or less callosity, dryness, and fissuring mark the disease. It is very chronic and intractable. Sometimes deep and painful fissures occur, and when these are found upon the feet locomotion is rendered almost or quite impossible. The diagnosis of eczema of the palms and soles is often difficult. It is apt to be confounded with psoriasis and syphilis. From psoriasis, eczema differs in showing, at times, moist and bloody fissures, while those of psoriasis are usually dry, and show little disposition to bleed. The patches of eczema are usually larger than those of psoriasis, and their edges pass gradually into the healthy skin. The patches of psoriasis

are smaller, darker, covered with more abundant and paler or white scales. But the best point in diagnosis is the appearance of the disease on other parts of the body. When the palms and soles alone are affected, it is sometimes hardly possible to distinguish eczema from psoriasis. The latter, however, is exceedingly rare, so that the chances are one hundred to one in favor of any given case turning out to be eczema. The diagnosis between eczema and syphilis of the palms and soles is not usually so difficult, although sometimes, when the affection is not found elsewhere, one may be puzzled to come to a decision. The infiltration of syphilis is of a firmer nature than that of eczema; it also extends more deeply into the skin. The patches are smaller and more circumscribed, and sharply defined upon the edge, and they have a tendency to spread upon the periphery and to assume the circinate form. Eczema is usually much more uniformly diffused; it is apt to be of a light color, while syphilis is darker, and sometimes ham-colored. It is also apt at times to itch, while syphilis does not itch. The history, and especially the occurrence of concomitant lesions elsewhere, will often aid the diagnosis.

The treatment of eczema upon the palms and soles must be of the most active and vigorous character, if relief is to be expected. The first point is to get rid of the thick epidermis. This may be accomplished by covering the palm with rags, spread with *sapo viridis* or wet with a five- to ten-grain solution of caustic potassa, and covered with rubber cloth. These are to be kept on day and night, until the epidermis is softened, macerated, and reduced to something like its normal thickness. Then stimulating ointments, containing mercury and tar, may be employed. When the physician himself can conduct the treatment of the case, the following plan may be employed: Let the affected palm or sole be soaked for some minutes in water

as hot as may conveniently be borne; and then, after the superfluous moisture has been hastily removed, let a twenty to forty per cent. solution of caustic potassa be firmly rubbed into the affected skin at all points, by means of a small mop, made of old-fashioned lampwick tied to a short stick. If this produces an uncomfortable heat, the surface may be washed with pure, cool water; otherwise, the following ointment is to be applied directly:—

R.	Hydrarg. ammoniat,	℥j	
	Adipis,	℥ss	
	Sevi benzoinati,	℥ij-℥j	
	Ol. amygdalæ dulcis,	℥x	
	Ung. petrolii, ad	℥vj.	M.

It should be spread over the surface, and also laid thickly upon rags and applied; waxed paper being wrapped about each finger and placed over the palm, both for cleanliness' sake and to aid the effect of the ointment. This is to be repeated daily until cracks heal up, the skin becomes thin and supple, and begins to assume a healthier appearance. Then the potassa applications are suspended, and a weak tar ointment—a drachm to the ounce—is rubbed in daily, to complete the cure.

Though the treatment just described is more particularly applicable to the palms, yet it may also be employed upon the soles. However, a better treatment for that form of eczema affecting the thicker skin of the soles is the glycerole of lead treatment, described above.

Of late I have employed the salicylated rubber plasters with very good effect. These are applied in the form of strips, and moulded so as to fit the skin closely, without folds or wrinkles. They may remain on for twenty-four hours to several days, but must be removed when they become loose, or, in any case, after some days. The softened epidermis may then be scraped away, and one of the applications above mentioned may be made. The plaster should then be again applied until the thickened, horny

epidermis is removed to a great extent, after which an ointment may be applied.

The treatment of this form of eczema requires even more patience than that of the other forms. Perseverance, however, will finally be crowned by success, unless the patient's general condition should be seriously at fault.

Eczema, when it occurs upon the *nails*, shows them deprived of polish, rough, uneven, and often punctate or honeycombed. The nail becomes depressed, particularly about the root, at which point its proper nutrition is arrested. It may gradually recover its normal condition, or it may be cast off and replaced by a new nail. With regard to treatment, tar ointment, one drachm to the ounce, applied about the root, with the internal administration of arsenic, promise the best results. When there is much tenderness unguentum diachyli may be used at night, and an ointment of a drachm of salicylic acid to the ounce of tar, or a salicylic rubber plaster, may be applied in the daytime.

It should be remembered that any blows or pressure applied to the end of the nail acts as an irritant, and consequently some kind of splint should be used to protect the nail. The rubber plaster will serve the purpose if properly applied, and the nail should be cut short. Eczema of the back of the fingers is frequently accompanied by disease of one or more nails, which passes away with the eczema or soon after.

Eczema in Infants.—Infants are liable to eczema from the first weeks of extra-uterine life, the chief differences between the disease as shown in these cases and as it manifests itself in later life being, on the one hand, the restricted causes which may give rise to the disease, and, on the other hand, the different appearance of the eruption, dependent upon the peculiar structure of the skin in early life. Eczema in infants and in young children is

due either to digestive disturbances, to teething, or to that inherited weakness of constitution and poor nutrition generally attributed to the scrofulous habit. Bottle-fed infants are most apt to suffer from indigestion, and these are also most liable to the eruption of eczema. While too much stress must not be laid upon the irritation of teething as giving rise to eczematous eruptions, yet when the tendency to eczema exists, each tooth, as it comes out, will often be accompanied by an eczematous rash, which fades away as the tooth develops. It will be found, on observation, that the children of parents who suffer from a tendency to phthisis, or who present the symptoms commonly associated with the idea of scrofula, are most apt to be attacked with eczema, even when fed on the breast and presenting no signs of indigestion. When, as among the lower classes, improper nourishment and bad hygienic surroundings are added, the disease sometimes takes on a quite severe form.

In children who suffer from repeated attacks of eczema, lasting after the period of teething, and without either disturbed digestion or the scrofulous taint to account for the persistence of the disease, the skin will often be found to present that dryness and rough, scaly appearance usually associated with ichthyosis, and the ichthyotic condition will grow more marked as the child grows older.

Moreover, asthma is a not unfrequent complication or accompaniment of the chronic eczema of childhood, and I have seen several cases where eczema, ichthyosis, and asthma occurred in the same individual. What the significance of this association is I do not know; it is worthy of further study.

The diagnosis of infantile eczema is usually not difficult. About the buttocks, genitalia, and folds of the neck it commonly occurs in the form of *E. erythematosum* or *E. intertrigo*. In the former locality it may be mistaken for syphilis, but the absence of deep infiltration, and, above all, the absence of characteristic syphilitic lesions, whether

of the palms and soles or of the body generally, will usually assist the diagnosis. The vesicular and pustular form is that commonly met with upon the cheeks, behind the ears, and about the head generally. It sometimes runs on to *E. rubrum*, with very abundant discharge of serum. Occasionally shallow ulcers with crusts form, and in this variety it is at times difficult to say whether we have eczema or syphilis. Especially is this the case when the child is poorly nourished and emaciated. But in syphilis we are apt to have "snuffles," cracks in the commissure of the lips, and lesions about the anus; also, some of the lesions are apt to be infiltrated, and to show deeper ulceration. Eczema tends to itch to a marked degree, and this alone will commonly distinguish it. Papular eczema is more apt to occur in older children; it may very readily be mistaken for scabies, but the points given under that head (see *Scabies*, and also the table of differential diagnosis between eczema and scabies, inserted above) will serve to distinguish between the two affections.

The treatment of eczema in infants must depend, to some extent, upon the cause. When indigestion seems to be at the bottom of it, the food must be changed and regulated. It is astonishing what blunders are made in the feeding of infants. The physician who desires to treat such cases of infantile eczema as come under his care with satisfaction and success must study in each case to obtain suitable food, and see that it is properly administered. Constipation in infants is a frequent cause of eczema, and should be combated. If habitual, the food should be changed with the view of improving this condition, while for occasional use the following powder may be administered:—

R.	Hydrarg. chlor. mitis,	gr. xij	
	Pulv. rhei,	gr. xvij	
	Magnesiae calcinat.,	ʒss.	M.
	Div. in chart No. vj.		
	SIG.—One every morning.		

This is the dose for an infant of eight to ten months; the quantity, of course, should be regulated according to the general condition of the child, as well as its age. It should not be given for more than a few days successively, and purging should be avoided. I find this a very useful powder in eczema of an acute or semi-acute character in constipated infants. If there is vomiting and dyspepsia, then lactopeptine, or pepsin and bismuth, may be administered.

When general debility exists, particularly when there is a scrofulous taint, syrup of the iodide of iron, in doses of five to ten drops, even in infants of a year old, may be administered. Sometimes, also, cod-liver oil, internally or by inunction, may be employed.

The external treatment of eczema in infants will depend upon the form of the disease present. When this is erythematous, and situated about the buttocks, genitalia, and folds of the neck, astringent dusting powders, as kaolin, oxide of zinc, and subnitrate of bismuth, may be employed; while parts that are in apposition should be separated by a thin wisp of absorbent cotton. Starch powders often do more harm than good in these cases, because they soon get moist, caked, sour, and irritating; but by the addition of boric acid this may be obviated. Black wash and dilute lead water may be used in some cases. Ointments are generally not well borne in this form of eczema. In vesicular and vesiculo-pustular eczema, and especially in eczema rubrum about the face and head, ointments are more useful. Scales and crusts should be cleaned away as far as possible, and then the milder and astringent ointments may be used first, and later those of a more stimulating quality. Powdered boric acid may be applied when there is moisture, and an ointment of boric acid, a drachm to the ounce of petrolatum, may be applied. The following are convenient formulæ:—

- | | | | |
|----|-----------------------------------|-----|----|
| R. | Pulvis zinci carbonat., | ʒj | |
| | Ung. cucumis, | ʒj. | M. |
| R. | Bismuthi subnitrat., | ʒj | |
| | Ung. aquæ rosæ, | ʒj. | M. |

In the more chronic forms of eczema rubrum of the face and scalp, more stimulating ointments are well borne, as this :—

R.	Picis liquidæ,	. . . . .	℥^{ss}	
	Pulv. zinci oxidi,	. . . . .	℥^{ss}	
	Ung. aquæ rosæ,	. . . . .	℥j.	M.

Another excellent ointment for use in the more chronic forms of eczema in children is the following :—

R.	Sulphuris præcipitat.,			
	Picis liquidæ,	. . . . . āā	℥ ^{ss-j}	
	Ung. zinci oxidi,	. . . . .	℥j.	M.

Instead of anointing with ointments, the cheeks and scalp, or other affected parts, may be painted with the following pigment, which is very effectual, and cannot be rubbed off like the ointments :—

R.	Ol. cadini,	. . . . .	℥j	
	Collodii,	. . . . .	℥j.	M.

Put a camel's-hair brush in the cork.

The prognosis of infantile eczema is almost always favorable, and it is right to use every effort to cure the case. To postpone treatment, and say, "oh, it will get well after teething," is, I think, unjustifiable and cruel.

Eczema Marginatum.—(See *Tinea circinata*.)

Eczema Seborrhœicum.—This is the name given by Unna to a group of affections which are eczematous in nature, but differ from the other forms of this disease by certain clinical and anatomical peculiarities.

Seborrhœic eczema usually shows itself first upon the scalp, but occasionally upon the eyelids or upon some other part of the body rich in sebaceous glands, as the axilla, the popliteal space, or the inguino-scrotal fold.*

On the scalp seborrhœic eczema may be latent for a long period, and then may show itself by an eruption of scales, the falling of the hair, patches of dry itching eruption sub-

* It is to be noted that Unna regards the sweat glands, usually so-called, as strictly speaking sebaceous in character, the sweat production being, so to speak, incidental.

sequently becoming moist, or an outbreak of eczema of the usual variety. The eruption is commonly accompanied by an outpouring of sebaceous matter, giving the scales a greasy character. (See *Seborrhæa*.)

The morbid process occurs under three different forms :—

(1) In the first form the affection remains in the purely pityriasic stage: the hairs fall more and more, and the variety of alopecia sometimes called *alopecia pityroides* is produced. (See *Pityriasis capitis*.)

(2) In the second form desquamation plays a more prominent part, greasy crusts surround and run up the shafts of the hairs, and in the parts most severely involved show a hyperæmic, slightly infiltrated skin underneath. The disease now tends to extend beyond the edge of the scalp, particularly about the temples and about the ears, showing a clearly defined border of a reddish-yellow color. Over the forehead the eruption extends in a circlet, sometimes called the *corona seborrhæica*. The ears, the cheeks, the nose, and the neck may be invaded in this stage.

(3) In the third form the catarrhal element becomes more pronounced, and there may be more or less moisture, with pruritus, tension, and redness of the skin. This form is most marked about the ears, extending from there to the neck in the adult, and forward toward the cheeks in the infant. The scalp meanwhile usually remains dry and scaly.

While this condition assumes a chronic character, acute exacerbations may take place from time to time, affecting the face, neck, and thorax.

After the scalp the thorax is the favorite seat of seborrhæic eczema. It shows itself here in the highly characteristic form of small patches of reddish-yellow, greasy scales, tending strongly to take on a circinate form, the circles being pretty uniformly the size of the thumb-nail, and usually grouped over the centre of the sternum.

It will be seen by this description that Unna is inclined to group many cases usually included among the ordinary forms of eczema under the designation *eczema seborrhœicum*. In all, however, the above described peculiarities are found at one point or another, or at one stage of the disease or another. By an extension, which will be less readily conceded, Unna appears to include some forms of psoriasis under the same designation, but when we consider how many anomalous cases seeming to form a connecting link between eczema and psoriasis are met with, it may be admitted that this extension of the conception of *eczema seborrhœicum* is not far-fetched.

The treatment of *seborrhœic eczema* may usually be of a more stimulating character than that of other forms of eczema. The following ointment is often useful:—

R. Hydrarg. chlor. mite, gr. viij-xv
 Pulv. zinci oxidi, ʒ ss-j
 Petrolati, ʒ v. M.

In irritable *eczema seborrhœicum* of the folds of the skin, the following is useful:—

R. Resorcin, gr. x-xij
 Pulv. zinci oxidi, ʒ ss ad ʒ j
 Ceratum simplicis, ʒ v. M.

Among sulphur ointments, which I think are the most useful, the following can be recommended:—

R. Pulv. zinci oxidi, gr. xv-l
 Sulphur præcipitat., ʒ ss-j
 Lanolini,
 Olei amygdalæ dulcis, aa . . . ʒ iij
 Ext. violet, q. s. M.
 (Brocq.)

In some cases the tarry preparations will be found useful. The following combination of yellow oxide of mercury and oil of cade I have frequently found effectual:—

R. Hydrarg. ox. flav., gr. viij-xv
 Olei cadini, gr. xv ad xxx
 Petrolati, ʒ v. M.

Ichthyol in ointments will prove beneficial in many cases.

Care should be taken to use perfectly fresh ointments, particularly when lard is the basis.

The parts should be cleansed with ichthyol soap or some similar soap, and if there is any irritation or moisture boric acid may be employed. There is little doubt but that parasitism bears a close causative relation to this affection. On the scalp I usually use a shampoo made with sublimate soap.

Elastic Skin Man.—(See *Dermatolysis*.)

Electricity in the Treatment of Diseases of the Skin.—The employment of electricity in the treatment of diseases of the skin has not been studied with the care which the subject demands. But little is known of the effect of the various forms of electricity upon affections of the skin, and such papers as have appeared upon the subject are scattered through general medical literature and difficult of access. Doumer, of Lille,* has employed "effluvation," which consists in placing the patient on an isolated stool and connecting him with the negative pole of an electro-static machine. A brush or point in communication with the positive pole is then brought near the body at a variable distance to obtain either a spark or a simple electric current. This appears to exert a favorable influence upon the nutrition of the tissues. In collaboration with Leloir, Doumer has used this plan of applying electricity in some fifty cases of eczema with favorable results.

A marked diminution in the pruritus and secretion is almost invariably observed, and this alone, by relieving the patient of the suffering and sleeplessness caused by papular eczema in especial, makes the treatment worthy of employment. The acute cases yield more readily to treatment than those of a more chronic character.

Marquant † has found the same method peculiarly effica-

* *Bull. Med. de Paris*, April 1, 1894.

† *Thèse de Lille*, 1894. *Bull. Med. de Paris*, August 19, 1894.

cious in the treatment of ulcers of the leg, particularly those of a varicose character attended by pain, or in patients whose nutrition is markedly defective.

The same treatment, I believe, has been found an admirable adjuvant in the treatment of lichen planus.

Cerebral galvanism has also been employed in severe cases of eczema generalized over the body, and will probably prove efficacious in dermatitis herpetiformis.

In acne the faradic current, with the positive pole applied to the nape of the neck and the negative to the region affected, has been found to be a useful adjunct to other forms of treatment. Hardaway believes the galvanic current quite as serviceable. Either pole (it is indifferent which) should be placed in front of the ear and the other passed over the eruption. In *seborrhœa* and *pityriasis* of the scalp Hardaway has employed the faradic current with good effect. The hair should be thoroughly wet, and a moderately strong current should be passed over the scalp for ten or fifteen minutes. In *urticaria* the galvanic and faradic currents, but particularly the former, are excellent palliatives in the distressing eruption. They have no permanent effect, however. The same may be said of *pruritus*. In the acute stage of *herpes zoster*, and in the chronic neuralgic condition which often follows, the constant current is of especial value, as pointed out under that affection. *Alopecia* of all kinds is benefited by electricity, notably in the form of faradism. *Scleroderma* and *morphœa* have been benefited by galvanism.

In employing electricity surgically, the object to be gained is mainly one of destruction. The actual or other cautery would serve this purpose, but the electrical cautery is more cleanly and more easily managed, and in many cases electrolysis, or the destruction of tissues by chemical action, is preferable to the electric cautery. Hardaway, in cases where electrolysis is not applicable, prefers the

thermo-cautery of Paquelin to the galvano-cautery. I have had no experience with Paquelin's cautery, but employ the galvano-cautery with entire satisfaction.

One of the commonest uses of electricity in dermatology is electrolysis for the removal of superfluous hairs. This is performed by the aid of a constant-current battery, using five to fifteen or more cells. The battery I have employed for some years past is that made by Mr. Otto Flemming, of this city, and which I have found perfectly satisfactory in every respect. The elements are zinc and carbon; the fluid, bichromate of potassium solution.

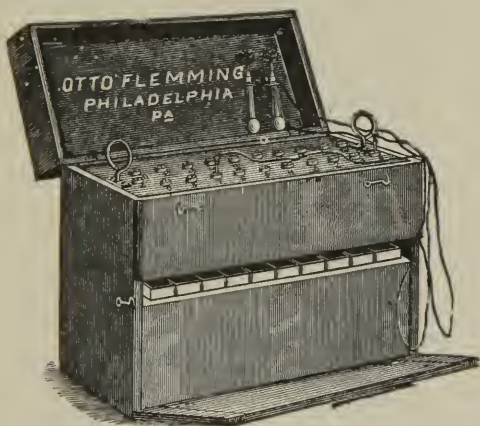


FIG. 14.—20-CELL CONSTANT-CURRENT BATTERY FOR ELECTROLYSIS.

I employ a sufficient number of cells to effect my purpose without troubling myself as to the number of milliampères the current measures. Though I am no advocate of rule-of-thumb in opposition to scientific measures, yet in an operation such as the removal of superfluous hairs, I think the educated sense of the operator better than the adjustment of the current by measurement.

The needle-holder used in electrolysis is that devised by Dr. Duhring and also made by Mr. Flemming, of which I subjoin a picture.

Other forms are in use probably as convenient for those who prefer them as this. One, which has a little button whereby the current may be made or broken without removing the finger from the holder, is very objectionable on account of the pain caused the patient.

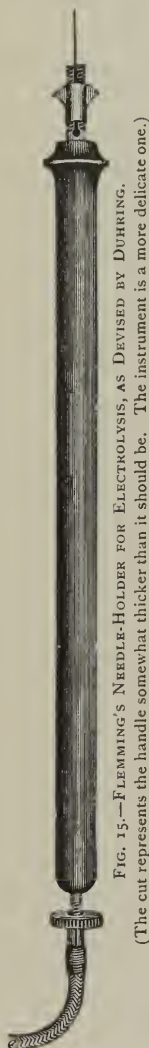


FIG. 15.—FLEMING'S NEEDLE-HOLDER FOR ELECTROLYSIS, AS DEVISED BY DUHRING.
(The cut represents the handle somewhat thicker than it should be. The instrument is a more delicate one.)

The needle used in electrolysis is inserted in a slot at the end of the holder, the two sides of the slot being then brought together by the small screw and nut arrangement depicted. The size of the needle employed depends upon the use to which it is to be put. For the removal of the finest downy hairs the steel needles prepared by Mr. Flemming by grinding down to the extremest tenuity of which the metal is capable are the best. These should only be used in the smallest hair follicles, because their slenderness and sharpness make it difficult to introduce them into the hair follicle without making a false passage. For larger hairs the irido-platinum needles made by the S. S. White Dental Company of this city may be employed. I have not been able as yet to have these made especially for my purpose. They have a sharp little hook at the end, which must be filed off and the end made round before using. These needles are so flexible that they seem to insinuate themselves into the hair follicles, and if they are rounded at the end are not near so apt to make a false passage as the stiffer instruments sometimes employed.

In the destruction of *nævi* larger steel needles may be used. In simple *rosacea* and in *acne rosacea* electrolysis sometimes gives admirable

results. It may be employed in the same manner as in the removal of superfluous hairs. (See *Hair, Diseases of*.)

Electrolysis has been employed by Hardaway in *lupus erythematosus* by means of multiple punctures, and by Wende in *xanthelasma*.

With regard to the employment of the electro-cautery, a different battery must here be used, one having few cells

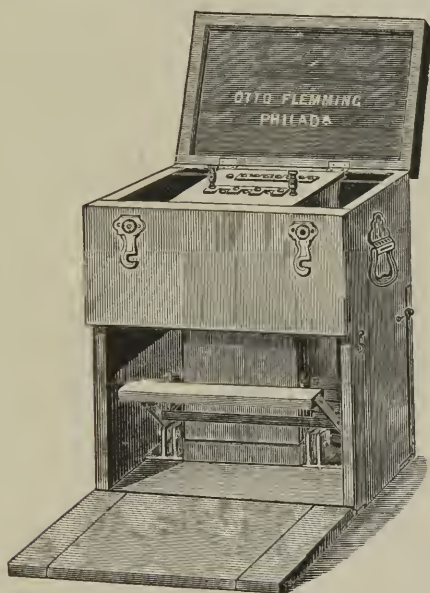


FIG. 16.—CAUTERY BATTERY.

with large plates. The one pictured here is also made by Mr. Flemming, and I have used it with great satisfaction for several years.

The intensity of the current can be regulated by pressure of the foot upon a treadle, thus leaving the hands entirely free. The conducting cords are attached to the vulcanite holder (Fig. 17), so arranged as to receive the necessary knives at the other end.

Held in the hand like a pen, the tip of the index finger is found in a position to make or break the current at will by pressure upon a button. Thus with the foot we can regu-



FIG. 17.—HOLDER FOR GALVANO-CAUTERY KNIVES. ABOUT HALF-SIZE.

late the degree of heat to which we wish the knives brought, and with the finger we can turn on or shut off the current at the shortest notice.

The various cautery knives here given represent those

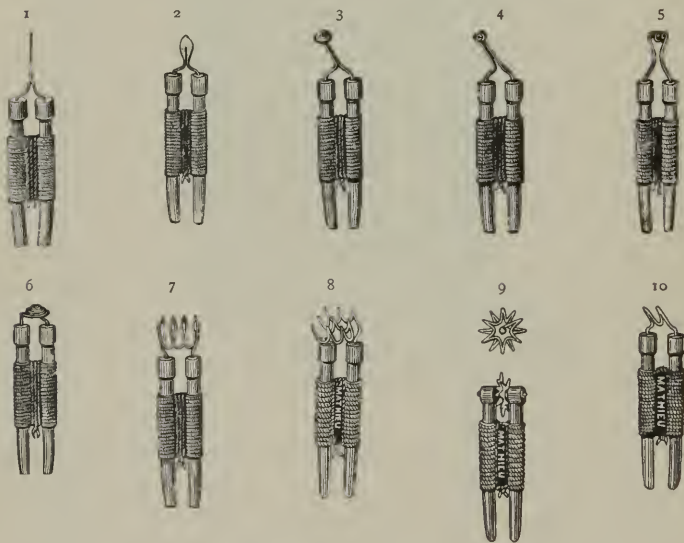


FIG. 18 —BESNIER'S GALVANO-CAUTERY KNIVES.

usually employed by me. Most of them were devised by Dr. Besnier, of Paris, but new shapes may easily be devised to suit the object to be accomplished. With these knives

scarification can be made in *lupus vulgaris* or in *lupus erythematosus*, or single nodules of disease can be destroyed by the spiral or pointed shapes.

This form of treatment can be used to remove small *fibromata*, *destroy nævi*, some kinds of *warts*, hairy or other *moles*, *lupus*, *tattoo marks*, and *epithelioma*. Some further account of the method of employing the procedures connected with the electrical treatment of skin diseases may be found under the titles of the various affections.

Elephantiasis.—Under the name of *Elephantiasis arabum*, or *Pachyderma*, a morbid condition of the skin is designated, which is characterized by an hypertrophy of the derma and of the subcutaneous cellular tissue limited to certain regions of the body, and the result of repeated attacks of inflammation of the capillaries and lymphatics.

Elephantiasis occurs under two different forms: (1) the elephantiasis of tropical countries, which is due to the presence in the economy of the *filaria sanguinis hominis*, and (2) the elephantiasis occurring in temperate climates and resulting from various morbid conditions, most of which are unknown or but little understood.

The affection usually begins by an attack like erysipelas, with lymphangitis, pain, and fever, followed by slight enlargement of the part. Similar attacks subsequently occur from time to time, the limb or region involved being slightly increased in size upon each occasion. At the end of a year or more, after a number of these attacks have taken place, the part is usually found to have increased considerably in size, to be chronically swollen, œdematous, and hard. In the limbs, the leg particularly, not only will the entire member be found enlarged, but the skin itself decidedly hypertrophied, as shown by the prominent papillæ, fissures, and more or less discoloration and pigmentation. The process usually goes on until very considerable deformity results. The appearance of the disease varies in

one part or another of the body. The commonest seat of disease is in the leg, one limb alone being generally attacked. The genitalia are next in point of frequency attacked. Other regions are more rarely assailed.

The amount of pain attending the disease varies; it is sometimes severe during the inflammatory attacks, while at other times and in other cases no pain is felt. The increased weight of the part, as in the case of the scrotum or leg, may interfere with locomotion.

Elephantiasis is found in all parts of the world, but is far commoner in tropical regions, where it seems to be endemic, particularly that form of the disease known as "lymph scrotum." *

The treatment of elephantiasis may be medicinal or surgical. During an inflammatory attack, rest, with local sedatives, are called for. Boric acid in saturated solution, or ichthyol may be applied; in fact, the treatment appropriate to erysipelas is also proper in this stage of the disease. (See *Erysipelas*.) Sabouraud † has found the streptococcus of erysipelas in the blood and serum during the acute exacerbations of the disease, and this certainly suggests that the treatment should be strictly antiseptic. After the pain and heat have subsided, the part attacked is to be encased in a closely-fitting bandage, alone or in connection with other remedies. Methodical compression, in fact, is a very important and, up to a certain point, the most advantageous treatment which can be applied. At first the bandage should be applied so as to produce a gentle but firm and even pressure, the amount of pressure being gradually increased from day to day. Thus the œdema is gradually reduced, a certain amount of absorption follows, and

* Congenital elephantiasis has been noted. See Sajous' *Annual Univ. Med. Sci.*, 1893, vol. iv, A. 21.

† Sajous' *Annual*, vol. iv, 1893, A. 21.

the venous and lymphatic systems regain tone. Strips of adhesive or India-rubber plaster may be used in some cases. Later, Martin's rubber bandage may be applied, the limb being first covered with a thin layer of cotton batting. Esmarch's bandage has been used, but I can see very little advantage in its employment, and the loss of tone caused by the sudden emptying of the swollen vessels makes it unlikely that a healing contraction will take place. More probably the flaccid vessels would rapidly enlarge again when the pressure was removed. Some such treatment as this, with rest, is the most appropriate, and should be persevered in as long as it seems to do good. The rest should include repose in a horizontal position, and should, if possible, be continuous. If the leg is the part attacked, it may be bound to a wire anterior splint, such as is used in the treatment of fractures, and then, if this is suspended on a frame over the bed, considerable freedom of movement for sitting up, using the bed-pan, changing the sheets, etc., can be attained without disturbing the dressing.

When eczema, with or without ulceration, is present, some approved local remedies may be used simultaneously with the bandaging, etc. One of the best forms of dressing for an eczematous elephantiasis is that of salicylic paste with the double muslin bandage, applied wet, as described under eczema rubrum of the leg.

There comes a time, however, when this form of compression ceases to be of benefit, and then the question arises, what further can be done to bring the parts to a normal condition? When the affection is of long standing and a considerable degree of fibrous hypertrophy is present, it must be confessed that the chance of entire restoration is poor. We know of no medicament or application which will cause the absorption of fibrous tissue on such a large scale. When, however, the effusion is slight, or at least when the solid deposit in the tissues is recent, mas-

sage will often do much toward causing its absorption. This plan of treatment also has the advantage that it may be employed upon the face, the genitals, etc., where the bandaging processes above described would not be available. There is no question but that the means of treatment at our disposal in elephantiasis of these parts are scanty enough in any case. Electricity, in the form of galvanism, has been employed by Mann in one case successfully. A zinc-carbon battery of sixteen cells was used,



FIG. 19.—ELEPHANTIASIS.

and the negative pole, a metal plate, was placed on the sole of the foot, while a moistened sponge, attached to the positive pole, was brushed across the surface of the limb.* Internally, quinine may be given during the febrile exacerbations, with a view of abating the fever. Iodide of potassium has also been recommended. Sulphide of calcium has recently been employed in lymph scrotum with marked success. It is supposed to kill the filariæ which may be present in the blood or lymph channels, and in any case is well worth a trial. The dose is three to six

grains daily, in divided doses. Change of climate is some-

* Helfrich (*Deutsche Med. Zeitung*, November 7, 1887), recommends in severe uncomplicated cases the excision of strips of skin after elastic compression, and followed by elevation of the limb and massage. The excision must go through as much skin as can be pinched up into a fold. With antiseptic precautions the wound heals by first intention. The after-treatment consists in development of the muscles by electricity and massage by *tapotement*. Massage by stroking is to be avoided as tending to develop the subcutaneous tissues. Bandaging should be continuous.

times of great importance. In cases where the disease has been contracted in a tropical climate, if the person seeks a more temperate region before the hypertrophic condition is far advanced, the attacks of fever often cease, and much may be hoped regarding recovery. On the other hand, if he remains in a tropical climate, repeated exacerbations of fever occur, each followed by a progressive advance in the hypertrophic process, and recovery is almost impossible. Ligation of the femoral artery has been practiced in a number of cases of elephantiasis of the leg. When the scrotum is attacked, an operation with the knife is the best treatment.

The prognosis of elephantiasis, once fully developed, is unfavorable as regards entire cure. Much may be done, however, in the earlier stages of the disease to arrest its progress. Great deformity attends the disease, the "elephant leg" being a favorite and striking illustration in works on surgery. Elephantiasis scarcely ever terminates fatally, though it is said a fatal result may follow an inflammatory attack in rare cases. For allied affections, see *Fibroma molluscum* and *Dermatolysis*.

Elephantiasis Græcorum.—(See *Lepra*.)

Ephidrosis.—(See *Hyperidrosis*.)

Ephidrosis Cruenta.—(See *Purpura*.)

Ephelis.—Ephelides or sun spots are deposits of pigment in the exposed portion of the skin. They are to be distinguished from lentigines and pigmentary nævi, which may occur in covered parts. (See *Lentigo* and *Nævus pigmentosus*.)

Epithelioma of the Skin.—Epithelial cancer of the skin may be either *superficial*, *deep-seated*, or *papillary*. The superficial or "flat" epithelial cancer usually makes its appearance as one or more grouped, small, yellowish or reddish papules or elevations, having their seat in the upper layers of the skin. The disease may originate in a

sebaceous gland, wart, or other growth, or in the form of a flat infiltration. After a time, it may be months or even years, the tubercle, wart, or infiltration, as the case may be, becomes fissured or excoriated, a slight brownish crust forms upon it, under which is a scanty, watery, or viscid secretion. The course of the disease is slow, but gradually new lesions appear, usually connected with the original one, and finally the tubercles break down, and ulceration of a superficial character sets in. The ulcer, at first small, may spread until it attains the size of a coin, or even of the palm of the hand. The ulcer is characteristic. It is usually roundish, but may be quite irregular, with either sloping or sharply defined edges. The border may be smooth and on a level with the skin, but is usually elevated into a pearly ridge all around the ulcer. Its base is usually hard, and secretes a scanty, viscid fluid; it bleeds readily. There is usually a peculiar and characteristic picking or crawling sensation in the lesion when it first begins to become fissured or excoriated, but there is usually no pain unless the ulceration is considerable. When fully developed the ulcer may remain *in statu quo* for an indefinite period, the patient's health, meantime, being excellent; or it may pass into the infiltrating, deep-seated variety, to be described. The lymphatic glands are not involved.

Rodent ulcer is a form of this variety of epithelial cancer. Its most frequent seat is upon the eyelids, particularly near the inner canthus, and next to this upon the side of the nose. When fully developed it consists of a circumscribed, sharply defined, greater or less excavation, with a brownish-red or purplish-red, dry, or scantily secreting, mammillated surface, the ulcer having often a rolled border. Its course is very slow but relentless; it invades every tissue with which it comes into contact, including muscles and bones. If neglected, great destruction of the parts may ensue, and

even death from hemorrhage in very advanced cases. A peculiarity of this form of epithelioma is, that it is a disease of the upper part of the face, occurring usually above a line drawn across the face horizontally, on a level with the *alæ nasi* and the lower border of the ears.

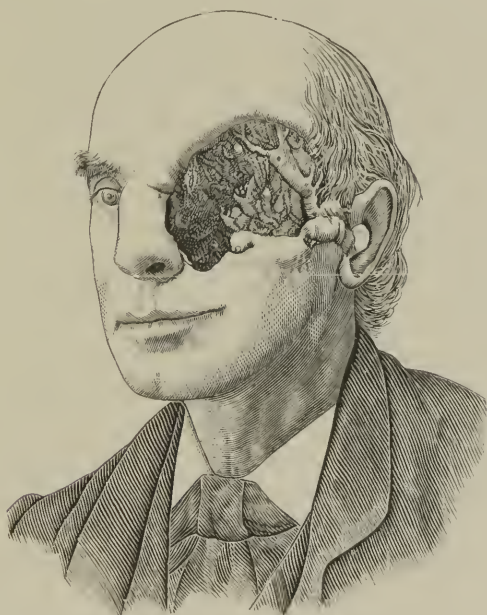


FIG. 20.—RODENT ULCER. (*After Cantrell.*)

Deep-seated Variety.—This variety of epithelioma, known also as the “infiltrating” variety, is much more serious than the superficial variety of the disease. It begins as a split-pea-sized tubercle, situated in the skin and subcutaneous connective tissue. It sometimes, however, begins in a wart, like the superficial variety. It is reddish or purplish in color, surrounded by an areola, firm and hard to the touch, and accompanied by infiltration of the surrounding tissues. In a longer or shorter time, according to the

malignancy of the case, usually months, ulceration usually begins, either from within or upon the surface, the tumor breaks down, and an ulcer of variable size results. This is deeply excavated, irregular in shape, with a violaceous base, secretes a viscid, offensive fluid, bleeds freely upon being touched, and is surrounded with infiltration, the skin being reddish in the neighborhood. The lymphatic glands become enlarged at a later period, the lancinating pains, which are often experienced from the beginning, become more severe, the patient suffers extremely and finally succumbs through marasmus and exhaustion. The course of this disease, though sometimes slow, is occasionally rapid. Duhring alludes to a case where the disease ran its fatal course in a year.

Papillary Variety.—In this variety of epithelioma, the lesion begins as a wart of split-pea size, or occasionally as a raised, lobulated, more markedly papillary formation of larger area. The surface is sometimes covered with dry, horny, epidermic scales, at other times it is moist and macerated. There are usually fissures secreting an offensive fluid, with sometimes cheesy, sebaceous matter. The fungous-looking granulated surface sometimes develops into fleshy protuberances, and at other times spreads out more flatly. After a time it breaks down into a characteristic epitheliomatous ulcer, running the usual course. Occasionally the papillary growth proceeds from a preëxisting superficial or deep, infiltrated ulcer.

Epithelioma is most commonly met with on the face, either on the lips or tongue, about the nose, the eyelids, the forehead, the temples, or upon the scalp. The genitalia, especially the penis and the scrotum in the male, and the labia in the female, are not uncommon seats of the disease. Epithelioma rarely occurs elsewhere, although it may be found in any part of the body. The lesion is usually single.

The exciting causes of epithelioma are often obscure. Epithelioma of the lip or tongue often starts at a point where the mucous membrane has been irritated by a pipe-stem or a jagged tooth. Chronic pruritus of the anus or vulva and congenital phimosis may in time give rise to epithelioma, which also occasionally originates in cicatricial tissue or in old ulcers. Warts and *nævi*, both pigmentary and vascular, are structures in which it often originates. The sebaceous warts of old persons seen so frequently upon the face, the backs of the hands and the scapular region often form the starting-point of epithelioma. Tumors of the skin called "benign," as fibroma molluscum, may become transformed into epithelioma. Psoriasis, also, as has been pointed out by Dr. J. C. White, may gradually develop into verruca and then into epithelioma.* The disease known as "angioma pigmentosum et atrophicum," and which has been the subject of a special and exhaustive study by R. W. Taylor, of New York, is allied in some of its aspects with epithelioma, as epitheliomatous growths occur in one stage of the affection in many cases. Lupus and syphilis of the skin may also become transformed into epithelioma. The disease is commoner among men than among women. It is less malignant than any other form of cancer.†

The diagnosis of epithelioma is usually not difficult, excepting in the earlier stages. It may be confounded with syphilitic tubercles and ulcerations, warts, and lupus.

* Some of the cases where cancer has been reported as resulting from the prolonged use of arsenic may be similar to that of Dr. White.

† Recently parasitism has been invoked as the cause of epithelioma. According to Darier and Wickham, Paget's disease, which is a form of epithelioma, is a *psorospermia*, that is, an affection due to the development of the supposed organisms known as "psorosperms" in the skin. The subject is under discussion at present, many dermatologists denying entirely the parasitic character of these appearances. (See *Psorospermia*.)

The papule or ulcer of epithelial cancer, especially if about the genitalia, may also resemble chancre; but the history of the case, the duration of the lesion, and a careful examination of its features, will aid in arriving at a correct opinion. The later syphilitic manifestations run a much more rapid course, and change in appearance more rapidly than epithelioma, and, when ulcerative, their secretion is much more abundant and purulent. Nevertheless, it is not rare, in my experience, to see cases of epithelioma about the face, which have been mistaken for the tubercular syphiloderm, and *vice versa*. What lends additional difficulty to the diagnosis in these cases is, that, as mentioned above, the syphilitic lesion now and then becomes transformed into epithelioma. I recall the case of a middle-aged woman showing a small ulcer near the inner canthus of the eye, which, after some hesitation, was pronounced syphilitic, and being treated with iodide of potassium healed up, returning again six months later, however, as unmistakable epithelioma, and quite uninfluenced at this time by the anti-syphilitic treatment. In making a diagnosis between syphilis and epithelioma in any case, the points mentioned should be borne in mind, and also the facts that the tubercular syphiloderm when ulcerating, usually shows several points of suppuration, while epithelial cancer is commonly single, and also that there is induration under and about the cancerous sore, while the syphilitic ulcer terminates abruptly against the sound skin. Finally, in cancer there is usually a picking and crawling sensation at first, and later lancinating pain. Syphilis is painless.

Many epithelial cancers begin as warts, and it is often difficult to distinguish between a simple wart and a cancerous wart. Usually continued observation alone will decide. In elderly persons any change in a wart of old standing upon the face, especially those flat, brown warts,

not uncommon in advanced life, must be looked upon with suspicion.

From lupus vulgaris, the diagnosis of epithelial cancer is chiefly to be made by the history. Lupus is a disease usually beginning in early life, and commonly has a long history. It is apt to be found in more parts of the body than one. When ulceration takes place, the diagnosis becomes more difficult, but a careful examination of the surrounding parts will commonly show some characteristic lupus lesions in the neighborhood. The discharge from a cancerous ulcer is usually pale, scanty, and viscid, and is often offensive; that from lupus is yellowish and puriform, and is not offensive.

DIFFERENTIAL DIAGNOSIS

BETWEEN

EPITHELIOMA.	VERRUCA (WARTS).
1. Rapid growth.	1. Grow slowly.
2. Tendency to ulcerate.	2. No tendency to break down.
3. Accompanied by lancinating pain at times.	3. No pain.
4. Usually occurs after forty years of age.	4. May occur at any age.
5. Growth but slightly elevated.	5. Growths elevated.
6. Tissues about lesion infiltrated and hard.	6. No infiltration about base of wart.
7. Lesion soon assumes a malignant form.	7. Remain benign for years.
8. Glands in neighborhood enlarged (sometimes).	8. Glands not affected.

EPITHELIOMA.	CHANCRE.
1. History of hereditary or local irritation.	1. History of infection.
2. Disease of past middle life.	2. Disease of youth or middle life.
3. Begins as an ulcer or warty growth.	3. Begins as an erosion or papule.

EPITHELIOMA.

4. Lancinating pain.
5. Disease lasts for months.
6. No secondary eruptions.
7. Glands (at times) enlarged, painful, and inflamed.
8. No induration of adjacent structures.
9. Secretion more abundant, in some cases bloody and purulent.
10. Internal treatment useless ; treatment surgical only.

EPITHELIOMA.

1. Disease of adults usually.
2. No accompanying skin lesions.
3. Lancinating pain (at times).
4. Induration circumscribed.
5. Deep ulceration may occur.
6. Loss of substance great where disease has lasted a long time.
7. Ulceration begins at one point.
8. Base deep, with hard, elevated edges.
9. Course rapid.
10. Discharge yellow, puriform, and offensive.

EPITHELIOMA.

1. History of hereditary tendency or local irritation.
2. Usually months in forming.
3. One point of ulceration.
4. Secretion scanty, bloody and viscid.
5. Surrounding structures infiltrated.

CHANCER.

4. Little or no pain.
5. Of short duration.
6. Presence of secondary eruptions.
7. Glands enlarged but not painful.
8. Induration of adjacent structures.
9. Secretion scanty and viscid.
10. Internal treatment curative.

LUPUS VULGARIS.

1. Begins in children.
2. Accompanied by papules and tubercles.
3. Little or no pain.
4. Induration diffuse.
5. Ulceration superficial.
6. Loss of substance small.
7. Ulceration begins at several points.
8. Base of ulcer even and granulating.
9. Course slow.
10. Discharge pale, viscid, and not offensive.

ULCERATIVE
TUBERCULAR SYPHILODERM.

1. History of syphilis.
2. Develops rapidly (in weeks).
3. Several points of ulceration.
4. Secretion abundant and yellowish.
5. No infiltration of surrounding tissues.

EPITHELIOMA.

6. Lancinating pain (in some cases).
7. Single deposit of cancer at first.
8. Ulceration most marked in centre.
9. Absence of syphilitic lesions.
10. Treatment entirely surgical.

EPITHELIOMA.

1. History of heredity or local irritation.
2. Usually single.
3. Common seat on face.
4. Begins in the skin.
5. Develops slowly.
6. Ulceration at first superficial.
7. Cicatrix hard and ulcerates easily.
8. Secretion scanty, purulent, and bloody.
9. Ulceration begins in skin.

ULCERATIVE

TUBERCULAR SYPHILODERM.

6. No pain.
7. Tubercular deposit usually multiple.
8. Heals at centre and spreads by periphery.
9. Presence of other syphilitic lesions.
10. Internal treatment curative.

GUMMATOUS SYPHILODERM.

1. History of syphilis.
2. May be multiple lesions.
3. Not common on face.
4. Begins beneath the skin.
5. Develops rapidly (weeks).
6. Deep ulceration from the first.
7. Cicatrix soft, pigmented, and healthy.
8. Secretion gummy and characteristic.
9. Tumors break down before skin ulceration.

The treatment of epithelioma is external and local. Only the more superficial forms are apt to come under the care of the dermatologist, the more severe forms usually seeking the aid of the operative surgeon.

It should be remembered that every source of irritation is in reality a cause of aggravation, and that, therefore, epithelioma is to be attacked only to be destroyed. All temporizing applications, like nitrate of silver, etc., merely add fuel to the flame, and aggravate the disease they are intended to cure.

For this reason I shall not speak of several remedies

which are mentioned as curative in this affection, as resorcin, chlorate of potassium, etc., because I think they are not thorough and effectual.

There is one preparation which has the sanction of time and experience to recommend it, and which has been imitated by quacks with great success, that is Manec's paste. This is composed as follows :—

R.	Acidi arseniosi,	ʒ j
	Hydrarg. sulphat.,	ʒ ij
	Spongia ustæ,	ʒ iv.

When needed, this is to be mixed with a sufficient quantity of water to make a paste.

The epitheliomatous patch to be operated upon must first be cleansed completely of all crusts and detritus by the employment of poultices, etc.

Then, the paste having been spread upon a bit of lint accurately fitted to the size of the lesion, this is to be applied and firmly attached by strips of adhesive plaster.

The application must be retained in place from one to two weeks. At the end of this time the eschar falls off, carrying with it, it is to be supposed, the entire neoplasm.

For my own part (while admitting the value of this paste on the testimony of many experienced dermatologists), an experience of many years induces me to favor the use of caustic potassa, which never fails to remove these superficial epitheliomata when used judiciously and thoroughly. A stick of caustic potassa is to be wrapped in a rag, leaving only the point exposed, and this is passed over the growth, gently at first, to dissolve the horny epithelium, when this exists, and then the potash stick is to be bored into every part of the substance of the growth. While operating, the unhealthy tissues are found to give way very readily, so that it may easily be perceived, by the increased resistance offered, when the caustic reaches sound tissue. It must be remembered that the action of the

potassa always proceeds a little further after the caustic has been withdrawn. This must be borne in mind when operating in the neighborhood of important organs, as the eye, or where arterial branches may become involved. The application of the caustic potassa gives rise to severe pain, which, however, rapidly ceases after its withdrawal. Of late, pain has sometimes been prevented by applying four to eight per cent. solutions of cocaine to the part before operating. When the effect has proceeded as far as is desirable, dilute acetic acid or weak vinegar, applied on rags, will neutralize the caustic influence, and put an immediate end to the pain. There is rarely any hemorrhage. The part operated on may be dressed with olive oil or some soothing ointment. The dressing is to be changed daily, and the eschar usually falls off at the end of a week or ten days, after which a rapidly granulating surface ensues, ending in an insignificant scar.

Pyrogallic acid in an ointment of the strength of a drachm to the ounce, applied on cloths, from two to six days consecutively, is a good remedy in certain cases, particularly when the patient cannot bear pain. It is usually painless. It may have to be reapplied, from time to time, the slough being cut or scraped away as it forms. Pyrogallic acid should not usually be trusted in the patient's hands, as too much action may be produced, or the effect may penetrate too deeply.

Among other means of removing epithelioma the galvano-cautery, especially in operations near the eye, is recommended by those who have used it. Scraping with the dermal curette, or sharp spoon, alone, or followed by the actual cautery, is another mode of removal. For the use of the knife, which is not needed in the majority of superficial epitheliomata, if these are taken in time, reference may be made to the standard works on surgery.

The prognosis of epithelioma is unfavorable, excepting

in the small and superficial lesions. Relapses are apt to take place after operation.

Eruptions, Feigned, Factitious or Artificial.—(See *Feigned Eruptions*.)

Eruptions, Medicinal, or Drug Eruptions.—(See *Dermatitis medicamentosa*.)

Erysipelas.—An inflammatory, infective disease of the skin, the result of the introduction of a specific microbe, the “erysipelas coccus,” characterized by a sharply-defined area of redness, which gradually advances to a larger surface, and is accompanied by relatively intense febrile action, and which generally terminates in complete recovery, with exfoliation of the epidermis upon the surface which was the seat of the disease. In order that the disease shall penetrate the organism, some crack or abrasion of the skin must be present; but external influences have much to do with the production of the disease. It appears to be endemic in some localities, as marshy places and hospitals. I remember that twenty years ago the monthly “house cleaning” at the Pennsylvania Hospital, which was undertaken and kept up for years by the lay authorities in spite of the protests of the physicians and surgeons, was almost invariably followed by the occurrence of one or more cases of erysipelas among the inmates of the wards. Certain individuals are especially disposed to erysipelas. Red- or light-haired persons with soft, white skins seem, it is said, to be most prone to frequent attacks of the disease.

The advent of erysipelas is usually announced by the occurrence of an initial chill of a more or less pronounced character. This may vary from a mere feeling of chilliness, which may quickly subside, to a severe rigor, even with symptoms of collapse. The chill is followed by fever, with sometimes an alarmingly high temperature. Delirium, parched lips and tongue, and all the symptoms of a severe disturbance of the vital forces, may be present. Soon the

skin symptoms appear near the wound, abrasion or other opening where infection has taken place. It should be said that the initial chill may be absent and the attack may be ushered in by vomiting, the skin eruption forming the first characteristic symptom.

The eruption on the skin or mucous membrane appears in the form of a red spot, more or less raised above the surrounding surface, with a sharply-defined, often irregular or zigzag, border, which gradually becomes larger by extension of one or more of its boundaries, and thus encroaches more and more upon the healthy skin, from which it is always to be clearly distinguished by its slightly-raised surface, its color, and especially by its sharply-marked contour. The redness of the diseased surface may be more or less vivid in intensity; most commonly it is of a dusky tint. The redness disappears on pressure with the finger, and a temporary depression of the skin is usually formed by the displacement of a certain amount of serous infiltration or œdema in the parts beneath. The redness soon extends rapidly but irregularly, and follows especially those directions in which the skin is loose.

The lymphatic glands of the affected region are usually enlarged, and the lymph channels of the part can sometimes be traced as red lines under the skin, extending from the area of the disease to the neighboring glands.

The erysipelatous process tends to advance from the point first attacked and to migrate to other parts of the surface. Thus I have seen it begin in the face, cross over the scalp from front to back, creep down the neck and shoulders, to terminate about the lumbar region. In severe cases of erysipelas, bullæ and even gangrenous patches may supervene.

The constitutional symptoms of erysipelas are often severe, though the disease usually follows a mild course. Occasionally a fatal result occurs, usually either from the

severity of the primary attack, from exhaustion induced by the continued spread of the inflammatory process and the intensity of the febrile reaction, or from its occurrence as a complication of other serious diseases, or, finally, from some sequela.

Erysipelas is prone to relapse in the same individual. In the milder forms I have seen it occur an indefinite number of times, always starting from the same point, as a chronic ulcer of the face or nose.

Erysipelas sometimes appears to exercise a curative influence upon certain pathological formations, as glandular carcinoma or erysipelas. The experiments which have been made, however, to utilize this peculiarity of the disease have not been encouraging. Like the spirits said to have been invoked by the magicians of old times, the demon has sometimes overcome his master, and the patient has succumbed to the erysipelas which has been artificially excited.*

The treatment of erysipelas should include the isolation of the patient and extreme cleanliness, with disinfection, when necessary, of all his surroundings.

* Emmerich and Scholl (*Deutsch. Med. Wochens.*), April 25, 1895, remark that in the struggle for existence between pathogenic micro-organisms, the microbe of erysipelas attacks and destroys the microbe of cancer. In 1886 Prof. Emmerich proved also that the microbe of milzbrand or anthrax (*Bacillus anthracis*) is effectually checked in its ravages by the microbe of erysipelas (*Streptococcus erysipelatis*) and the disease healed within forty-eight hours, and sometimes even sooner. The *Krebsserum*, or specific for cancer, is procured by bleeding a sheep infected with a pure culture of the microbe of erysipelas, and preserving the blood for some time in a sterilized vessel; the microbe is then eliminated, and the residue of blood-serum is the aforesaid specific, which has been applied by Prof. Emmerich to six cases of advanced and aggravated cancer in Munich, Bavaria, apparently with complete success. Whether in these inveterate cases the disease has been wholly cured or only temporarily checked, it is as yet impossible to determine; but Prof. Emmerich is firmly convinced that his serum will prove to be an infallible remedy for carcinoma, sarcoma, and all kinds of malignant scirrhus tumors, if taken in their early stages.—(*N. Y. Nation*, June 27, 1895)

Locally, the greatest variety of applications has been recommended. In addition to the use of antiseptics, such applications should be made as will relieve the tension of the skin.* Ulrich† employs an ichthyol varnish composed as follows :—

R. Ammon. sulpho-ichthyolate,
 Ætheris, āā f 5 ij
 Collodii flexile, ad f 3 i.

with which he has obtained excellent results.

Solution of bichloride of mercury 1-1000, sprayed over the diseased surface at a distance of four inches, and repeated four times daily, has been successfully used in the local treatment of erysipelas. In using this treatment the hair should be cut off over all affected portions of the body, and, when used on the face, the eyes should be protected.

For further details of treatment, the reader is referred to medical text-books, as my intention in treating of erysipelas in this place is chiefly to aid in the diagnosis of the affection from those other skin diseases with which it is apt to be mistaken.

The following tables will aid in this respect:—

DIFFERENTIAL DIAGNOSIS

BETWEEN

ERYSIPELAS.

1. Frequently history of contagion.
2. Severe constitutional symptoms.

ERYTHEMATOUS ECZEMA.

1. Not contagious, frequently history of eczema.
2. Accompanied by mild symptoms.

* Ichthyol has recently been employed as a local treatment with marked success. After disinfection of the wound or other centre of erysipelas, the entire affected surface is painted with an ointment of equal parts vaseline and ichthyol. It is then covered with ten per cent. salicylic lint. The dressing is renewed daily until the skin symptoms abate. On the face an emulsion of ichthyol in collodion may be employed.

† Hospitals-Berichte, 3. Jahrg., Bd. vii, No. 41, 1889.

ERYSIPELAS.

3. Intense shining redness with œdema.
4. Creeping eruption, spreading peripherally.
5. Inflammation very acute and deep-seated.
6. Intense burning and little pruritus.
7. Very painful on pressure.
8. No discharge except from ruptured blebs.
9. Vesicles form late.
10. Lasts for a few days.
11. Line of demarcation distinct.

ERYSIPELAS.

1. Usually caused by contagion.
2. Presence of blebs.
3. Desquamation.
4. Skin uniformly red and puffy.
5. Line of demarcation distinct and regular.
6. Constitutional symptoms severe.
7. Eruption frequently limited to face.
8. Burning and painful to the touch.

ERYSIPELAS.

1. History of contagion.
2. Severe constitutional symptoms.
3. Line of demarcation.

ERYTHEMATOUS ECZEMA.

3. Less œdema and glossy redness.
4. Not essentially a creeping eruption.
5. Inflammation less acute and superficial.
6. Intense itching and some burning.
7. Not very painful on pressure.
8. Usually some secretion.
9. Vesicles form early, if at all.
10. Eruption lasts for a week, or, more often, months.
11. No line of demarcation.

URTICARIA.

1. Caused by eating fish, oysters, etc.
2. Presence of wheals.
3. No desquamation.
4. Skin irregularly swollen and inflamed.
5. Limit of eruption irregular and indistinct.
6. Slight constitutional symptoms.
7. Not usually limited to one part of the body.
8. Itching and burning, but little pain on pressure.

ERYTHEMA SIMPLEX.

1. Not contagious—history of indigestion, etc.
2. Mild constitutional symptoms.
3. Limit of lesion not distinct.

ERYSIPELAS.

4. Deep inflammation.
5. Intense shining redness and swelling.
6. Formation of blebs.
7. Eruption spreads slowly and peripherally from central point.
8. Lesions last for a week or longer.
9. Diffuse redness.

ERYSIPELAS.

1. History of contagion.
2. Acute affection.
3. Tending to spread peripherally.
4. Presence of blebs.
5. Intense shining redness.
6. Line of demarcation.
7. Regularly and abruptly-raised outline.
8. Severe constitutional symptoms.

ERYSIPELAS.

1. History of injury or blood poisoning.
2. Eruption limited in extent.
3. Skin is infiltrated.
4. Diffuse redness with blebs.
5. Well-marked line of demarcation.
6. Eruption has shining and glazed appearance.
7. Eruption perfectly smooth to touch.

ERYTHEMA SIMPLEX.

4. Inflammation very superficial.
5. Skin red, but not swollen or glossy.
6. No presence of blebs.
7. Eruption appears suddenly without creeping.
8. Lasts but a day or two.
9. Occurs usually in patches.

CHRONIC DERMATITIS.

1. History of injury, exposure, poisoning, etc.
2. Runs a chronic course.
3. Not a creeping lesion.
4. Blebs usually absent.
5. Lesions have a dull, soggy appearance.
6. No line of demarcation.
7. Outline irregular and not abruptly elevated.
8. No constitutional disturbance.

SCARLET FEVER.

1. History of contagion.
2. Eruption spreads over body.
3. Skin not thickened or infiltrated.
4. Diffuse redness with punctated spots.
5. Redness fades off gradually.
6. Eruption has a light scarlet color.
7. Eruption has a slightly rough feel.

ERYSIPELAS.

1. Intense and diffuse redness.
2. Redness limited by line of demarcation.
3. Burning and itching sensations.
4. No grouping of vesicles.
5. Eruption not limited to nerve course.
6. Severe constitutional symptoms.
7. Eruption not confined to one side.

HERPES ZOSTER.

1. Redness not diffuse.
2. No line of demarcation.
3. Severe neuralgic pain.
4. Vesicles appear in distinct groups.
5. Vesicles follow a nerve course.
6. No severe constitutional disturbance.
7. Eruption limited to half of body.

Erysipeloid.—This is a peculiar circinate and gyrate erythematous eruption commonly observed on the fingers, hands, and toes. It begins as a small red papule, and spreading over the parts while healing in the centre, creeping from place to place and presenting when fully developed the appearance of festoons and segments of circles. The affection is more closely allied to erythema than to erysipelas. Rosenbach supposes it to be due to some form of wound-infection and to be microbic in character.

It is accompanied by severe itching and burning at times, and gives rise to no constitutional symptoms.

Erysipeloid has no definite duration, but may possibly disappear in from one to four weeks. Elliott, of New York, uses applications of ichthyol in the form of a 15 per cent. ointment to hasten the disappearance of the disease.

Erythema.—Six varieties of erythema may be mentioned: *E. simplex*, *E. intertrigo*, *E. vaccinium*, *E. variolosum*, *E. multifforme*, and *E. nodosum*. Of these the first four are simply hyperæmic, with little or no inflammatory exudation, while the last two are characterized by more or less exudation of a plastic character, and are dissimilar enough to

demand separate description. The erythemata disappear without leaving any mark or scar.

Erythema Simplex is characterized by redness, occurring in the form of variously-sized, diffused or circumscribed, non-elevated patches, irrespective of cause. There are two varieties: the idiopathic, under which head are included the erythemata occasioned by heat and cold, continued pressure or rubbing, and the action of irritant or poisonous substances, as mustard, arnica, various dye-stuffs, acids and alkalies; and the symptomatic, due to some general derangement of the economy, as disorders of the stomach and bowels, etc., or connected with microbic infection. Certain general diseases are at times accompanied by hyperæmia of the skin, which shows itself in the form of roundish spots, the size of a pea or finger nail, to which the name *roseola* has sometimes been given. It denotes simply the form of erythema, and in no way indicates the nature of the disease which has brought it forth.

The treatment of erythema must obviously depend upon its cause in any given case. The removal of the obvious cause is alone usually sufficient in idiopathic erythema, but in the symptomatic form of the disease the internal disorder to which the cutaneous manifestation is due must be diligently sought out and treated, with a view to removal. Locally, soothing and astringent lotions may be employed. A much-used lotion in erythema, when the skin is unbroken, is the following:—

R.	Acidi hydrocyanici, dil.,	℥j	
	Bismuthi subnitrat.,	℥j-ij	
	Aquæ aurantii flor.,	f℥iv.	M.

Sig.—Outside use.

The old calamine lotion, slightly modified, may also be used:—

R.	Pulv. zinci carbonat. præcip.,		
	Pulv. zinci oxidî,		
	Pulv. amyli,		
	Glycerinæ, aa	℥iv	
	Aquæ,	Oss.	M

Dilute lead water, or lead water and laudanum, or simple alcohol and water, may be used with satisfaction in most cases. As for powders, though useful, they will be found in practice difficult to keep in contact with the skin. Ointments are very apt to disagree in simple erythema, and should, therefore, as a general thing, be eschewed.

Erythema Intertrigo is characterized by redness, heat and an abraded surface, with maceration of the epidermis. It occurs chiefly in those parts where the natural folds of the skin come in contact with one another, as about the nates, perineum, groins, axillæ, and beneath the mammæ, and is produced by the friction of two opposing surfaces. It is especially common among fat persons, women with pendulous mammæ, and infants whose skin is tender. The skin feels chafed and becomes hot and sore. Perspiration also, at times, macerates the epidermis, and gives rise to the secretion of an acrid, mucoid fluid. If neglected, a true dermatitis may set in. The affection comes suddenly, and if taken in time may usually be quickly checked, but if not treated it soon becomes very annoying. Occurring between the nates, a common seat of the disease, it may interfere with walking. It is usually harder to cure in infants, where the diaper, saturated with more or less acrid secretions, is constantly in contact with the skin.

The disease is one of summer rather than winter, although it may occur at any time of the year, if sufficient cause be present. It is sometimes brought on by wearing rough underclothing. I have known severe erythema intertrigo of the nates and thighs caused by walking about, after sea-bathing, in wet bathing clothes. The rough surface of the flannel, as it dries, becomes coated with minute acicular crystals of salt, which cut like tiny knives. The patient sometimes supposes himself to have been "poisoned" by a hired bathing dress, when the cause of his erythema is purely mechanical, as just mentioned.

The treatment of erythema intertrigo is commonly an

easy matter. As a rule, very little is required beyond cleanliness and attention. The parts should be washed with cold water alone, or with the sparing addition of castile soap, and dried with a soft rag or towel. The folds of the skin are to be separated and kept apart by pieces of soft linen, lint, or absorbent cotton. Dusting powders are the most convenient remedies in most mild cases. When there is little discharge, or none, starch or lycopodium may be used. Starch, however, is apt to cake and sour if dusted on a moist surface. The following powders are much less liable to this objection, and may be used alone or in combination: Oleate, oxide and carbonate of zinc, carbonate and subnitrate of bismuth, magnesia, fullers' earth, kaolin, and talc. When starch is admissible, and there is no break in the skin, the following preparation is one of the best:—

R. Pulv. camphoræ, ʒ iss
 Pulv. zinci oxidi,
 Pulv. amyli, āā . . . ʒ j. M.
 To be made into a perfectly impalpable powder.

The mixture should be kept in a tightly-corked, wide-mouthed bottle.

In cases which are obstinate, diluted black wash, applied several times a day, alone or followed by the use of some bland powder, as above, is an efficacious remedy. Dilute alcoholic lotions, composed of alum or sulphate of zinc, a few grains to the ounce, also prove serviceable in stubborn cases. In intertrigo about the thighs and genitalia there is often an element of hyperidrosis. In these cases tincture of belladonna may be painted on the parts daily and followed by one of the more astringent powders, as the oxide of zinc. In the case of infants, when the intertrigo is about the anus, and the stools are thin, with an acid smell, the following powder may be given internally:—

R. Calcis præcipitat., gr. iss
 Bismuthi subnitrat., gr. ij
 Sacch. alb., gr. iij. M.

Sig.—One, thrice daily.

When the stools show casein, minute doses of hydrochloric acid may be given.

In addition to the common forms of erythema simplex and E. intertrigo, the following varieties are worthy of special mention :—

Erythema Infantile, sometimes called “roseola infantile,” is a not infrequent symptom of gastric disturbance in infants. It also results at times from the presence of worms, teething, and various febrile complaints of infancy and childhood. It occurs chiefly on the trunk, both anteriorly and posteriorly, and to a less degree on the face and extremities. The lesions may be split-pea-sized, discrete spots, or a diffuse punctate redness. It is usually very ephemeral. Erythema infantile may be mistaken for scarlet fever or measles, but the absence of high fever and of the characteristic symptoms of the latter affection, as they show themselves elsewhere than on the skin, will decide the question.

Erythema Vaccinium, sometimes called “roseola vaccinia,” displays small or large, reddish, erythematous patches over the trunk and extremities. It occurs either on the first or second day after vaccination, or else at the period of beginning maturation of the vaccine vesicle, about the eighth or ninth day, rarely later. There is usually some fever. The eruption may be mistaken for the erythematous syphiloderm, and sometimes patients imagine that syphilis has been inoculated with the vaccine virus. It is important, therefore, to make the diagnosis. Of course, the history of syphilitic inoculation, with the double incubation period, etc., is conclusive. The dusky red of erythema is also very different from the usual fawn color of the erythematous syphiloderm. (For an account of other eruptions following vaccination, see *Vaccination Eruptions*.)

Erythema Variolosum, one of the prodromal rashes of smallpox, is important as an aid to the early diagnosis of

the latter disease. It appears as a diffuse punctate redness, or in discrete, erythematous patches, often accompanied by small petechiæ. The characteristic locality of the eruption is over the abdomen and inner side of the thighs, also the flexor surface of the elbows and knees, the dorsal surfaces of hands and feet, the axillæ, and a triangular space over the sternum. It sometimes assumes the shape of long stripes over the tendon of the extensor longus of the dorsum of the foot. Rarely this form of erythema may attack the face and extremities. A later form of this variety of erythema may occur during the stage of suppuration and exsiccation. It may be local or may extend over the whole surface, and is apt to be accompanied by redness of the pharynx.

There are certain forms of erythema connected with septicæmic poisoning after operations, etc., also after the inhalation of coal gas.

Erythema Gangrenosum.—(See *Dermatitis gangrenosa*.)

Erythema Multiforme.—This, which is a disease related, to a certain degree, with erythema simplex, and yet differing from it, perhaps, chiefly, in the greater amount of exudation, is characterized by the occurrence of reddish, more or less variegated macules, papules, and tubercles, occurring discretely or in patches of various size and shape. The name has been given to this form of erythema, on account of the protean character of the lesions, which manifest themselves as erythematous patches of the most varied shapes and sizes, or as papules, vesico-papules, and tubercles, scattered or in groups. Various names are given, denoting the arrangement of the lesions. Thus we have *E. annulare*, occurring in circular patches. Sometimes the circles are very large, or are broken, and assume gyrate forms; this is *E. marginatum*.

Erythema Papulatum is the commonest variety. It shows

itself in the form of isolated or aggregated flat papules of varied size and shape, bright red, bluish or purplish in color, and which soon fade, seldom lasting longer than a week or ten days. *E. tuberculatum* is simply an exaggeration of this form, and all of the varieties mentioned are but forms and stages of the same process, and are often met with, two or more occurring together simultaneously on the same individual. The lesions of *E. multiforme* disappear spontaneously, leaving, perhaps, slight pigmentation and desquamation.

Erythema Iris, sometimes called "herpes iris" and (one form) "hydroa" (see *Hydroa*), is characterized by the appearance of one or more groups of variously-sized vesicopapules or vesicles, arranged in the form of concentric rings, attended, as a rule, by the display of various colors. The patches vary in size from that of a small coin to several inches in diameter, and are made up of a number of, usually rather indistinct, vesicopapules or vesicles, which arrange themselves side by side, so as to form a perfect ring. It is a peculiarity of the disease that new vesicles are constantly forming on the periphery while the centre is healing up. When there are a number of independent patches they sometimes coalesce, and the interlaced arrangement of the concentric and variegated circles present a picture so striking that, once seen, it can never be forgotten. It looks, sometimes, as if the patient had been tattooed in rings of various colors, the prevailing tints being red, yellow, and brown. The backs of the hands and feet, as in the other varieties of *E. multiforme*, and the arms and legs are the localities usually attacked, but sometimes the trunk is also involved. The eruption is not usually accompanied by subjective sensations of any kind.

Erythema multiforme is usually found on the backs of the hands and the fingers, forearms, and legs. It may show itself on the face and trunk. Sometimes it attacks the

mucous membrane of the mouth, anus, etc., and even the conjunctiva. Now and then it is general, involving the whole surface. A marked feature of the disease is the disproportion between its appearance and the subjective symptoms to which it gives rise. Notwithstanding the angry look which the eruption often assumes, there is very little itching or burning. Sometimes constitutional symptoms, as malaise, headache, rheumatic pains, and gastric derangement, are present in marked cases.

The affection is much commoner in the spring and fall, although it sometimes occurs at other periods of the year. It is among the eruptions of the skin more frequently met with in this country. The American statistics show 915 cases of erythema multiforme among 123,746 cases of skin diseases reported—a proportion of .1739 per cent.

The etiology of erythema multiforme is a complicated one. The following "pathogenetic" classification drawn up by Jacquet will give a fair idea of the relationships of the disease from this point of view:—

A. NERVOUS	{	Peripheral causes.	{	Moral shocks.
				Violent sensory impressions.
				Exaggerated vasomotor influence (menstrual period).
				Special reflex irritation (irritation of the genito-urinary system).
	{	Central causes.	{	Chorea.
				Hysteria.
				Cerebral hemorrhage.
				Tumors.
				Locomotor ataxia.
				Various forms of myelitis.
B. TOXIC	{		{	<i>Drugs.</i> —Quinia, salicylic acid, iodide of potassium, etc.
				Nephritis, uræmia.
				Acrodynia, dengue, pellagra.
				Toxiderma of intestinal origin.
			{	Not classified.

C. INFECTIOUS	{ Almost all known infections; especially	{ Cholera.
		{ The puerperal state.
		{ Generalized tuberculosis.
		{ Syphilis.
		{ Severe icterus.
		{ Typhoid fever.
		{ Typhus fever.
		{ Angina.
		{ Septicæmia.
	{ Various other infectious diseases.*	

The differential diagnosis of erythema multiforme is a matter of some importance, as some of the diseases for which it is liable to be mistaken are widely different in character and demand very different treatment.

Erythema multiforme is liable to be mistaken for urticaria, papular eczema, purpura rheumatica, erythema nodosum, dermatitis herpetiformis, lichen ruber planus, and pemphigus.

The following table exhibits the diagnostic differences :—

DIFFERENTIAL DIAGNOSIS

BETWEEN

ERYTHEMA MULTIFORME.

1. Lesions multiform in shape and size.
2. Unattended with itching and burning.
3. Lesions well pronounced.
4. Eruption passes through several stages.

URTICARIA.

1. Lesions nearly uniform.
2. Intense itching and burning.
3. Lesions less pronounced in character.
4. Eruption does not go through different stages.

* Schulthess, of Zurich, has had the opportunity of observing an unusually large number of cases of erythema multiforme (113 in all, between 1880 and 1891). He regards the disease as an infectious one, *sui generis*. Some of these cases of Schulthess appeared to occur in connection with influenza; twice he observed meningitis following the disease. He also considers it to be a very serious affection when occurring in the young, and this has been my experience, as noted above. The little patients remain in an extremely anæmic condition for some time, and not infrequently, according to Schulthess, tuberculosis supervenes, occasionally exudative pleuritis.

ERYTHEMA MULTIFORME.

5. Colors of eruption decided and varied.
6. Lasts for a week or more.
7. Absence of wheals.
8. Skin not especially irritable.
9. Cause not known.

URTICARIA.

5. Eruption persistently white in color.
6. Usually of short duration.
7. Principal lesion a wheal.
8. Welts immediately produced by irritating the skin.
9. Often the result of digestive disturbance.

ERYTHEMA MULTIFORME.

1. Lesions various.
2. No burning or itching.
3. Papules large size.
4. Papules irregular in shape and form.
5. Eruption usually passes through several stages and colors.
6. Lesions last for a week or more.
7. No patches of exudation.
8. Apt to recur at special seasons of the year.

PAPULAR ECZEMA.

1. Lesions papular.
2. Severe itching.
3. Papules smaller.
4. Papules regular in shape and outline.
5. Lesions remain about the same in form and color, but vesicles may also be present.
6. Lesions last for several weeks.
7. Exudation common.
8. May occur at any time.

ERYTHEMA MULTIFORME.

1. Usually not accompanied by joint symptoms.
2. Lesions hyperæmic.
3. Occurs especially on the backs of hands and feet.
4. Color bright red or pinkish.
5. Color fades on pressure.
6. Some burning and itching.
7. Lesions multiple.
8. Markedly inflammatory in character.

PURPURA RHEUMATICA.

1. Rheumatic symptoms well marked.
2. Lesions hemorrhagic almost from the first.
3. Appears especially about the joints.
4. Color purplish or black.
5. Does not disappear on pressure.
6. No burning or itching.
7. Lesions macular.
8. Not inflammatory.

ERYTHEMA MULTIFORME.

1. Lesions multiple.
2. Superficial inflammation.
3. Seen usually on forearms, backs of hands, and sometimes on body.
4. Appears in several forms or stages.
5. No appearance of tumors.
6. No pain or burning.
7. Color varied, but seldom hemorrhagic.

ERYTHEMA MULTIFORME.

1. Lesions multiform, but principally macular, papular, or tubercular.
2. Backs of hands, feet, and extremities most affected.
3. Disease seldom lasts over two or three weeks.
4. Subjective sensations rarely marked.
5. Erythematous lesions markedly raised.
6. Lesions pass through several stages of development and changes of color.
7. Lesions usually a peculiar dusky, raspberry-red color.
8. Lesions usually symmetrical.

ERYTHEMA MULTIFORME.

1. Multiple lesions.
2. Lasts for a week or more.
3. Slight itching, if any.

ERYTHEMA NODOSUM.

1. Lesions single or few in number and scattered.
2. Lesions deep seated.
3. Almost always confined to lower extremities.
4. Lesions do not pass through a succession of stages.
5. Lesions appear as tumors or nodes.
6. Painful and often burning.
7. Ecchymotic appearance of lesions.

DERMATITIS HERPETIFORMIS.

1. Lesions multiform—erythematous, vesicular, bullous or pustular, one or all three.
2. May attack any part of the surface.
3. Disease runs a chronic course.
4. Subjective sensations severe, especially itching.
5. Erythematous lesions, when present, slightly raised.
6. Lesions, though multiple, do not usually change in character.
7. Color of lesions various, but the red is brighter.
8. Lesions usually asymmetrical.

LICHEN RUBER PLANUS.

1. Lesions uniform, squarish in outline, papular.*
2. Lasts for months.
3. Severe itching.

ERYTHEMA MULTIFORME.

4. Eruption occurs in different forms or stages.
5. Does not follow any particular nerve tract, but is usually observed on backs of hands and feet.
6. Acute inflammation.
7. Leaves slight pigmentation.
8. Runs through a series of shades of red, purple, etc.

LICHEN RUBER PLANUS.

4. Lesions remain papular.
5. Lesions follow nerve trunks or lines in the skin.
6. Chronic inflammation.
7. Pigmentation well marked.
8. Lesions ham color or a slightly dusky red.

ERYTHEMA MULTIFORME.

1. Lesions multiform.
2. Bullæ not usual. When they occur, spring from inflamed base.
3. When bullæ form, may result from coalescence of vesicles.
4. Lesions several days in developing.
5. Eruption runs through various stages.
6. General health usually good.
7. Lesions often symmetrical.
8. Individual lesions last a week or more.
9. Apt to occur at certain times of the year, as spring and fall.
10. Accompanied by inflammatory symptoms.

PEMPHIGUS.

1. Lesions bullous.
2. Bullæ always present, and spring directly from skin.
3. Lesions bullous from the first.
4. Lesions develop rapidly.
5. Eruption begins and ends with bullæ.
6. Health always impaired.
7. Lesions asymmetrical.
8. Each lesion lasts for three or four days.
9. May occur at any time.
10. Little or no inflammation about lesion.

Some forms of erythema are due to blennorrhagia, which is now recognized as a general infectious disease; formerly these manifestations were considered as in all probability due to the medicaments used.

Copaiba I used to think was the cause of these eruptions, but so many observations have been made proving the contrary that the blennorrhagia is now generally

admitted to be the cause. The eruptions occurring in the course of blennorrhagia are polymorphous, resembling rubeola, scarlatina, and purpura, and are accompanied by more or less decided general symptoms. Bergeron (*Thèse de Paris*, 1894) says that these erythematous symptoms are really angeio-neurotic in character. In cases where the balsams have been used the diagnosis even becomes extremely difficult. The erythema met with in connection with blennorrhagia may be distinguished from the copai-vic eruption by the following symptoms:—

COPAIVIC ERUPTION.

1. Follows the administration of the medicine.
2. Stops quickly on suppression of medication.
3. Generally takes the form of an urticaria or polymorphous erythema.
4. Is very itchy.
5. Locates about the hands, feet, elbows, knees.
6. Recurs often when medicine is resumed.
7. Unaccompanied by fever.
8. Often a history of other idiosyncrasies.

BLENNORRHAGIC ERUPTION.

1. Appears irrespective of medication.
2. Lasts frequently a week.
3. Is of rubeoliform or scarlatiniform type, and terminates in desquamation.
4. Itches little.
5. Is often generalized, preceded sometimes by angina.
6. Is not influenced by medication.
7. A real infectious complication, often febrile.
8. No individual predisposition.

In the majority of cases no active treatment is called for; light diet, the avoidance of stimulating drinks, mild saline laxatives, with the local application of dilute alcohol or of carbolic acid, may be employed, as this:—

R.	Acidi carbolici,	f ℥ ij	
	Glycerinæ,	f ℥ j	
	Aquæ,	ad	Oj.
			M.

Salicylate of sodium, however, has been used with success in some cases.

Dusting powers, as that of camphor, oxide of zinc, and starch, given under erythema intertrigo, also prove useful at times. Internally, iodide of potassium in doses of half a drachm daily has been highly recommended. I have tried it repeatedly, however, without any effect.

Erythema Nodosum.—This affection is characterized by the formation of rounded or ovalish, variously-sized, more or less elevated, reddish nodes. The disease is apt to be ushered in by some general disturbance of the system; the nodes often appear suddenly; they may come on any part of the body, but are commonly found on the legs and arms. They vary in size from a small nut to an egg, are reddish in color, tending to become bluish or purplish. As they disappear, they undergo various changes of color, like a bruise, and it is often difficult to distinguish the lesions from ordinary contusions, especially when they occur over the shins. When the disease is at its height, the lesions have a tense, shining look, as if they contained fluid, and often an indistinct sense of fluctuation is perceptible. They never suppurate, however. Not unfrequently they are more or less hemorrhagic in character. They vary in number from a few to a dozen or more. They come out, as a rule, in crops. They are painful or tender on pressure, and are usually attended by burning sensations. Sometimes the lymphatic vessels are involved. The affection usually terminates in recovery in two to four weeks. An "ominous" form has been described by authors, which is said to be the precursor of tuberculosis. I myself saw one case, in which a little boy, after suffering for three or four weeks with erythema nodosum, fell into a delirious condition and died, with the symptoms of tubercular meningitis.

Erythema nodosum is a comparatively rare disease. The American statistics show that it occurs only eighty-two times in 123,746 cases of skin disease, .066 per cent.

No active treatment is called for. Rest in the recumbent posture, the correction of any functional derangement, quinine, if required, is all that will usually be needed. If there is a family history of tuberculosis, it will be better to give cod-liver oil from the beginning.

Erythema, Desquamative Scarlatiniform.—A peculiar scaly eruption of the skin, resembling the toxic erythemata on the one hand and pityriasis rubra and scarlatina on the other. The disease is ushered in by malaise, lassitude, rigors, which may be severe or slight, and may last for several days. Next, a febrile movement sets in, reaching, probably, its highest point in the first two or three days, and sometimes attaining a high temperature. Pains in the back and limbs, headache, sometimes severe, occasional anxiety and insomnia with epistaxis are the chief symptoms. Nausea and retching are rare, as is anorexia. There is no diarrhœa; the perspiration may be excessive, but in most cases is entirely suppressed.

The eruption may come out early, or not until several days after these symptoms set in. The lesions are usually very small at first, but soon coalesce and form scarlet patches, sometimes very extensive and usually accompanied by considerable burning, pricking, smarting, and itching. These symptoms, sometimes very distressing, do not last long, and often disappear before the eruption has completed its evolution.

The cutaneous manifestations may take their rise at various points, beginning at the upper portion of the body and traveling down to the feet, or *vice versa*. In one case it may first appear on the upper and inner aspect of the thighs, in another it first invades the wrists, extending in succession to the arms, the forearms, the axillæ, the legs, and the body; it may attack several localities simultaneously.

In any case the eruption tends to spread rapidly, some-

times invading the whole body within twenty-four hours, though in very rare instances several days may be required. The head and extremities are usually the last points attacked; the head may escape.

When completely developed, the eruption is characterized by an intense and uniform redness, which, however, shows darker shades in places, as the back of the neck and the abdomen. Occasionally œdema is observed; in one case an hemorrhagic appearance was assumed.

When the redness has lasted over the whole surface three or four days (in rare cases longer), desquamation sets in, beginning as a small superficial fissuring of the epidermis; the cracks widen and extend, the epidermis between them rises and loosens, turns to a pearly-white, and gradually becomes detached in flakes. This desquamation is distinguished by its dryness and abundance, the scales being swept from the patient's bed in handfuls every morning. The individual scales are then dry and transparent; they may be quite large, an inch or more in diameter. There is no moisture at any time.

Sometimes the mucous membranes share in the disease process, and an erythematous angina of slight severity is observed. In most cases the tongue is white at first and then it seems to desquamate, becoming smooth, glazed, raw looking, and of a bright red color. The nails and hair are frequently shed.

Patients complain of dryness of the skin, the insensible perspiration seems suppressed, chilliness is experienced in undressing. Thirst is marked; the kidneys seem normal. Bronchial and cardiac complications are unknown.

The patient's appetite and strength are restored in most cases, even before the termination of the eruptive stage, and patients often remark that, were it not for the redness and desquamation, they would feel as well as usual.

One of the most striking features of this affection is its

tendency to relapse. The first attack is usually the most severe, lasting as long as a month or six weeks. Then after an interval of a few months to several years there may be a second one not so severe. Successive relapses may then occur, following one another with increasing frequency and decreasing severity until they may even merge into one another. Tilbury Fox had a case which presented at least one hundred relapses.

The diagnosis of relapsing desquamative scarlatiniform erythema is at times by no means easy, and it is made more difficult by the fact that the affection itself varies so greatly in its symptoms in different cases, and seems to merge on one side or another into some similar affections, as eczema or psoriasis, with which, however, in its typical form it has little in common.

The affections with which it may be confounded are, erysipelas, eczema erythematosum, pityriasis rubra, the toxic erythemata, and scarlatina. For the distinguishing characteristics of the former, see under their respective heads. The diagnosis from scarlatina is, however, of great importance and sometimes of no little difficulty. The following table will give some aid in distinguishing the two diseases :—

SCARLATINIFORM ERYTHEMA.

1. Non-contagious.
2. Onset less abrupt.
3. Febrile reaction less marked and diminishes rapidly in degree.
4. Angina absent or comparatively slight.
5. Redness of skin pronounced, desquamation profuse, and eruption lasts longer with relapses.
6. General constitutional symptoms slight.
7. No serious complications.

SCARLATINA.

1. Highly contagious.
2. Onset sudden.
3. Febrile reaction very marked and continuous.
4. Angina marked.
5. Eruption less marked. Runs a short uniform course.
6. Severe constitutional disturbance.
7. Albuminuria, buboes, endocarditis, etc., accompany the disease.

The treatment of this form of erythema must be on general principles. Diuretics and tonics are usually indicated, with soothing, oleaginous applications externally.

Parasyphilitic Erythema.—Closely allied to the ordinary multiform erythema is a very curious affection occurring in the course of syphilis. It is very difficult to understand whether this affection is syphilitic or not. It shows itself in the form of circinate erythematous patches occurring in the latter stages of syphilis or rather in patients who have been suffering from this disease a year or two previously, and shows itself in the form of rings of circinate erythematous patches. In the few cases I have myself observed they occurred over the shoulders and have been completely rebellious to antisyphilitic treatment, but equally so to all other forms of treatment.

Erythrasma.—An affection of the skin characterized by pin-head to palm-sized erythematous, rosette-shaped, or irregular macules, of a reddish yellow, yellowish or brownish color, covered with a slight coating of fine floury scales most marked at the periphery of the lesion, which is sharply defined. Vesicles and pustules do not occur.

The disease is said to affect chiefly those parts of the body where exposed surfaces of the skin are in contact, as in the axillæ, groins, cleft of the anus, and those parts where the scrotum touches the thigh. The eruption spreads very slowly and in serpiginous outline. It may last for months and years without apparent change.

Erythrasma is the result of the growth of a very minute vegetable fungus, the *microsporon minutissimum*, much smaller than those of the *tineas* in the superficial layers of the epidermis.

The diagnosis of the affection is to be made in distinction from *tinea versicolor*, *chloasma*, and *pityriasis rosea* (q. v.).

The treatment is naturally that of the vegetable parasitic diseases of the skin generally. (See *Tinea versicolor*.*)

Excoriations, Neurotic.—(See *Neurotic Excoriations*.)

Exfoliative Dermatitis.—(See *Dermatitis exfoliativa*.)

Farcy.—(See *Glanders*.)

Favus.—(See *Tinea favosa*.)

Feigned Diseases of the Skin.—Eruptions, self-produced, with or without the intention to deceive, are probably of more frequent occurrence than would be supposed, from the rarity with which such cases are found reported in medical journals. Such cases are commonly found among hysterical women, or among soldiers, sailors, and prisoners, who are apt to be malingerers.

Laugier (*Dict. de Méd. et de Chir. Pratiques*, article "Maladies Simulées") gives a classified description of the various affections of the skin commonly simulated. *Sycosis* has been imitated with greater or less success by means of applications of tartar emetic ointment, which produces umbilicated pustules followed by thick crusts. Oil of cade or tar produces a similar eruption. Sequestration of the patients beyond the reach of irritating substances is followed by a rapid cure. Even close observation of individual lesions for a few days will show the presence of the artificial eruptions, as the lesions run a rapid course, while those of *sycosis* are much more persistent.

Favus is imitated by dropping nitric acid on circumscribed areas of the scalp, protecting the neighboring parts by a circle of grease or ointment. This produces lesions resembling the yellow cups of *favus*, but to be distinguished certainly by microscopic examination, which in the case of *favus* infallibly shows the presence of fungus. *Favus* is such a rare disease in this country that it is not likely to

* See Ducrey and Reale, *Contrib. al. Stud. Erythrasma Prima Com.*, Napoli, 1893, and *Annales de Derm. et de Syph.*, 1894, p. 495, for the latest researches.

be simulated often. As its presence permitted the French conscript to avoid service in the army, simulation of favus was formerly not uncommon in that country.

Alopecia Areata may be simulated by plucking out the hairs over a circumscribed area, but a close examination will show traces of this rather violent operation, and surveillance even for a few days will permit the growth of new hairs to be perceived by the eye before they grow long enough to allow of a fresh epilation.

Tinea Tonsurans is simulated by the partial destruction of the hair by means of depilatories. These, however, give rise to an irritation of the skin quite different from the peculiar ash-colored, goose-flesh-like surface to be seen in *tinea tonsurans*. Microscopic examination of the short hairs will, as in the case of supposed favus, show the character of the disease.

Scabies may be simulated by careful tearing up of small portions of skin by the aid of a fine needle. The absence of the peculiar and characteristic burrow of the itch insect, and the impossibility of demonstrating the presence of the acarus, make it an easy matter to detect a fraud of this sort.

Bromidrosis.—Among the means resorted to in France to avoid conscription, the production of fetid odors appearing to proceed from the sweat-glands finds a place. Although this mode of malingering has not gained a place in this country, it is worth mention—the inunction of the axillæ with Dippel's animal oil, grease impregnated with asafœtida, decayed fish, or cheese. Frauds of this sort are easily detected if the suspected person can be cleansed thoroughly and placed under surveillance for a short time. Carbonate of sodium and permanganate of potassium can be used for disinfection. An additional mode of detection is the examination of the soles, which, in true bromidrosis, present a macerated appearance. After thorough cleansing, if the

supposed malingerer is caused to sweat violently, the perspiration freshly secreted will show whether or not true bromidrosis is present.

Hæmatidrosis is, in fact, a hemorrhage which occurs over a smaller or greater area of unbroken skin. In many cases it is to be considered as one of the nervous symptoms of hysteria in the young, particularly in young females, and though sometimes genuine, is not infrequently simulated. Careful surveillance, with examination to make sure that the blood of some animal be not substituted, or some minute punctures practiced, will alone suffice to make the diagnosis plain. (See *Hæmatidrosis*.)

Chromidrosis has frequently been simulated, and, in fact, the existence of some forms of genuine chromidrosis was denied for a considerable time. Black chromidrosis, in particular, was formerly held in great suspicion. But the careful investigations of several experts, particularly in France, have placed the existence of the disease beyond question. Plumbago, soot, indigo, pure or mixed with talc, have been employed to imitate the peculiar blue-black of some varieties of chromidroses. To discover a fraud, the part should be carefully washed, examined with a lens, and kept under careful observation, or covered and sealed. Microscopic examination of the substance appearing on the surface will sometimes throw light on the materials composing it, and thus lead to a discovery of the genuineness or falsity of the supposed chromidrosis. Black chromidrosis is the only form which has been simulated. For the description of this, as well as the other forms of chromidrosis, reference may be made to the article on that subject.

Vesicular and Pustular Eruptions (dermatitis, eczema, etc.).

1. *Imitated Eruptions*.—Croton oil and other irritants are used by malingerers soldiers and others to produce pustular eruptions, and sulphur, turpentine, pitch plasters, mercurial ointment, etc., are also employed for the same

purpose. All these substances give rise to confluent vesicles becoming rapidly purulent, or to vesico-pustules covered with a thick crust.

Mechanical irritation may be employed, with the result of giving rise to eruptions resembling dermatitis. Sangster described the case of a young girl, where the diagnosis was made first as "abortive herpes," and later as "neurotic excoriation," where painful erythematous patches were succeeded by exudation on the surface of serum and sero-pus, each patch terminating in desquamation, and running its course in ten to fourteen days. There was no vesiculation or loss of substance. The longest interval during which the patient had been free from the lesions was three months. The case came under observation at intervals for three years, but finally Sangster was able to satisfy himself that the lesions were produced purposely by forcibly tearing with the nails.

Stelwagon has described the case of a girl of nineteen, pale, nervous, and suffering from hysterical aphonia, who applied for relief for an eruption which had persisted almost uninterruptedly for three months, and which consisted in groups of two or more parallel, elongated, crusted lesions, situated on the flexor and extensor surfaces of the forearms and on the tibial surfaces of the legs, with eczemaform patches in the flexure of one elbow and on one instep. The crusts resembled those of *impetigo contagiosa*. The patient, who had been for some time unsuccessfully treated, was finally suspected of simulation, and on being closely questioned, confessed having produced the lesions by constant rubbing with the finger ends. The sensation thus given was an agreeable one, and it was this, she asserted, and not the desire to gain sympathy, which was her object.

Fortner has described the case of an unmarried woman, 25 years of age, who applied for the relief of a supposed loss of power in the thumb, probably hysterical. Shortly after coming under observation, certain peculiar lesions

showed themselves on the back of the right hand and wrist, consisting of four oval abrasions, three-quarters of an inch in length by one-quarter broad, and presenting the appearance of a blister from which the cuticle has been removed, leaving a raw surface bathed in serum. Zinc oxide ointment was applied and the limb securely strapped and bandaged, when the sores quickly healed. New ones appearing a little later, Fortner, suspecting the artificial character of the lesions, took occasion to rub a stick of lunar caustic over each abrasion until considerable pain resulted. This acted as a deterrent, and no more sores appeared. Seven months later, however, the patient returned with the same lesions. She belonged to a markedly neurotic family, and Dr. Fortner very properly reached the conclusion that the lesions had been artificially produced, probably to create sympathy.

A similar case has been reported by Murrell. A young girl of 14 showed certain lesions which had appeared on and off for a year previously, breaking out immediately after the occurrence of nervous phenomena called "fits." According to the history given, the arms and legs alone had been affected, the eruption coming on in the night, and the lesions presenting, when examined, the appearance of blisters or burns, and taking a long time to heal. Subsequently "bladdery heads" formed, full of water, and these burst, leaving sores. On examination, several elongated patches, like recently healed blisters, one and a half inches long by one-half inch broad, could be seen on the arms and legs and under the mammary region. Although, when taxed by the examining physician, the patient persistently denied having produced the lesions upon herself, yet there seemed no doubt that the lesions were artificial and self-made.

I have observed several similar cases occurring in young women, where, however, no clew could be gained as to the

cause of the eruption. In one case erythematous patches of irregular shape, soon yielding to slight exudation and crusting, or occasionally to denudation of the skin, occurred on the face, backs of the hands, forearms, and occasionally the legs. The eruption usually occurred about the menstrual period. The eruption seemed to be a dermatitis. It was accompanied at first by a burning sensation, but gave no trouble afterward. The eruption seemed to be a source of great shame and annoyance to the patient. Although it was suspected of being factitious, no proof of this could be obtained.

Under the name "so-called erythema gangrenosum," Dr. T. C. Fox has described two cases, in one of which large rounded or oval patches of gangrenous inflammation of the skin of the neck and arms appeared successively or at intervals for several years, leaving in some cases faint scars, in an hysterical woman of forty-five; while in the other case, a girl of seventeen, there existed erythematous areas of a severe type, like scalds, running into vesiculation and drying up without scars. The localities affected in the latter case were the *mammæ*, forearms, thighs, and legs.

Pemphigoid Eruptions.—Bazin has reported a case in which a young girl succeeded in producing an eruption of bullæ by introducing cantharides powder under the epidermis.* A case was reported by the late Dr. Fagge, of London, in which a young girl caused an eruption of bullæ resembling those of pemphigus by the application of nitric acid to the skin. A careful study of the course pursued by the eruption, together with an examination of the buccal and pharyngeal mucous membranes, and a consideration of the patient's general health, will throw light on the character of the eruption.

* Pierrepont (Sajous' *Annual*, vol. iv, 1889, p. 62) gives a similar case caused by fly blisters.

Rupia (ulcero-crustaceous syphiloderm ?) is said to have been imitated by the ingenuity of French malingerers, but as this eruption is usually accompanied by profound cachexia and other signs of malignant syphilis, it is not difficult to distinguish the true from the false eruption.

Papular eruptions, particularly *urticaria*, are occasionally simulated by the application of nettles, etc., or by the ingestion of substances known to produce the eruption. As these eruptions are transitory, the subjects of them must usually be hysterical persons, as malingerers would hardly be likely to take the trouble for nothing. The absence of concomitant general symptoms must be relied upon to establish a diagnosis, in connection with the precautions mentioned above, *e. g.*, surveillance, etc.

Ulcers.—The factitious production of ulcers has been a practice of malingerers and deceivers of all ages. Various animal, vegetable, and mineral substances have been employed to cause such a destruction of tissue as shall simulate a true ulcer. Oil of cashew nut, cantharides, the clematis vitalba or common virgin's bower (a former remedy for scabies), the ranunculus sceleratus, a species of crow-foot, the anemone pulsatilla, the euphorbia lathyrus, bryony root, savin, nitric acid, potassa caustica, and frequently caustic lime. This list is inserted to aid the diagnosis in doubtful cases, but commonly there are certain features of the factitious ulcer which will serve to distinguish it from other affections with which it is liable to be confounded. Thus the appearance of the sore and its surrounding parts, the condition of the patient, and the probability or not of any advantage to be gained by simulation. In the lower limbs the presence or absence of varices, dermatitis, eczema, previous gummatous swellings, etc., should all be taken into account. See also the description, in other parts of this work, of diseases apt to give rise to ulceration, *e. g.*, cancer, epithelioma, scorbutus, scrofula, syphiloderma,

ulcers, dermatitis medicamentosa, etc. In the case of genuine ulcers kept up by stimulant or irritating substances, hermetically sealing the part and surveillance are required to demonstrate fraud.*

Erysipelas is occasionally simulated by the application of irritants. Thapsia is employed for this purpose in Europe. The artificial dermatitis thus produced does not, except to the most superficial view, resemble erysipelas; there is little or no fever, no general symptoms of any kind, in fact, and the affected surface commonly shows minute phlyctenulæ, or numerous minute vesicles.

Phlegmon, or *abscess*; is occasionally produced by excessive stimulation of the surface, or by the introduction of foreign objects under the skin. The malingerer or simulator must, in these cases, not only possess unusual fortitude to induce painful lesions of this sort, but must also be sufficiently alive to the pathological necessities of the case to put his sticks and thorns, or what not, in places where such objects would be apt to become imbedded. Such simulations are not always without danger. Hutchinson gives a case in which amputation had to be performed as a result.

Leprosy.—The *St. Louis Medical and Surgical Journal*, October, 1889, mentions the case of a Swede admitted to the Cook County Hospital, Chicago, with an affection which the patient asserted to be leprosy and which was said to have been contracted in Sweden. Careful investigation developed the fact that it was a case of *assimulatis*. Unfortunately, the report is so meagre that none of the symptoms are mentioned.

2. *Sustained or Aggravated, Vesicular or Pustular Eruptions*.—The diagnosis in these cases must be made, not as to the nature of the eruption, originally a spontaneous one,

* See Tufnell, Simulation of Venereal Ulcers (*Dublin Hospital Gazette*, 1859, N. S., vol. vi, p. 24).

but as to the cause of its persistence. Such cases not infrequently occur in large hospitals, when the soothing applications made during the day by the physician are replaced at night by irritants. Hermetic occlusion of the affected spot or localities, with surveillance, will unmask the fraud.

Feigned diseases of the skin are often very difficult of diagnosis. On the one hand, care must be taken not to mistake professional eruptions, as bakers', bricklayers', sugar-boilers', bartenders' dermatitis, or the eruptions produced by the ingestion of drugs (see *Dermatitis medicamentosa*) or of certain edibles, for factitious eruptions; and, on the other hand, it must be remembered that various skin diseases may be closely simulated by artificial means, and that such deception may be kept up for months. In the case of soldiers and prisoners, where fraud may be suspected, such measures as bandaging, surveillance, etc., may be practiced; but among hysterical females of the better classes the difficulties of diagnosis are heightened by the fact that factitious eruptions may be caused by a sort of automatic mental impulse, and without any perceptible object.

Two points must be remembered in such cases. First, the disease is almost always anomalous in the time, place, or manner of its appearance and in the course it runs. Second, it almost always shows some sign of having been artificially produced, and is almost invariably in a position easily and conveniently accessible to manipulation. Thus the face, forearms, chest, and mammary region, and after these the lower limbs, are most apt to be the seat of the eruption. If, in addition, any motive for malingering, or for exciting interest and sympathy, can suggest itself, the case should be carefully looked into from this point of view. The lesions and their neighborhood should be examined, with a view to detecting any trace of the use of mechanical irritants, or of such domestic articles as are apt to be used;

mustard, vinegar, cantharides, nitric acid, etc., have all been employed. The examination should always be so made as to avoid suspicion of its object, and if the physician comes to a positive conclusion that the eruption, in any given case, has been artificially produced, let him not think of proclaiming his conclusion, which will probably only lead to the suspicion, on the part of friends and relatives, that he does not know his business. Better to treat such cases with placebos, and have them recover spontaneously, without forcing the patient to admit a deception, or pitting one's reputation for sagacity against the patient's veracity. Of course, I have chiefly in mind the case of women feigning skin diseases.

Fibroma Molluscum, also called *molluscum fibrosum*, is a chronic hypertrophic affection of the skin, characterized according to the variety of the affection by a single or a few pendulous tumors, or by numerous sessile or pendulous growths of the cutaneous connective tissue. Though it is possible that these two varieties may run into each other, the generalized variety very often showing one or several tumors of large size, and the circumscribed tumor being occasionally accompanied by a number of small lesions, yet it will be convenient to consider them separately.

The generalized form of the disease is characterized by the presence of cutaneous tumors, from a dozen or more to thousands in number, sessile or prominent, roundish in outline, soft, indolent, and generally of small size, though occasional exceptions occur. The lesions are found on all parts of the surface, even upon the palms or soles, but are usually most numerous upon the head and trunk, where they are sometimes so closely set as to be confluent. They occur somewhat less frequently upon the limbs, diminishing as the extremities are approached. The skin covering the genitals is occasionally, though rarely, affected. In some cases, where a post-mortem examination has been made,

some of the internal organs have been found to display these tumors, and in several cases they have been observed in numbers upon the nerves.

The lesions vary in size from that of a pin-head to a hazelnut, and are found occasionally as large as a hen's egg, but rarely larger. The smaller ones may be felt in the skin but rarely rise above the surface, while the larger ones are more prominent and tend to become pedunculated and pendulous. The seat of the lesions is in the derma, and they move with it. Their color is that of the normal skin or slightly pinkish; occasionally they are covered with a fine vascular network, giving a violaceous tint. On some lesions, especially those upon the back, the orifice of a dilated sebaceous duct can be seen, from which a plug of sebum (comedo) may be squeezed. The sebaceous glands, however, are in no way essentially connected with the growth; nor are the hairs, but the latter occasionally fall out, probably from pressure.

The tumors are of various consistency, but they are always more or less soft and flaccid, excepting in the case of the larger ones, which are occasionally distended and firm, with a smooth, glistening surface as if the tumor were œdematous. Alongside of such tumors may be seen others which have a flaccid, empty feeling, like a scrotum without its testicles or a raisin deprived of its seeds. A curious point is that, although the tumor can be rolled between the fingers, firm pressure reveals a firmer central core of tissue vaguely defined to the touch.

Generalized fibroma molluscum is an indolent disease, and patients rarely come under the notice of the physician excepting for some intercurrent affection. While the tumors usually seem perfectly stationary, yet now and then a case is observed in which one or several of the lesions seem to increase in size and may become enormous. The period at which this change takes place varies in different cases. It

may occur at puberty, or in the female during gestation if the tumor be seated upon the labia. The growth thus distinguished becomes pendulous, while preserving its rounded form, or takes the form of a dewlap, approaching to the kindred formation known as *dermatolysis*, *pachydermatocoele*, *cutis pendula*, etc. (See *Dermatolysis*.)

Circumscribed fibroma molluscum commonly occurs in the form of one, two, or rarely three tumors (which in the latter case are situated alongside of one another) of variable, but always considerable size, which is the greater according to the size of the tumor. The size in some cases reported has been enormous. In one case an enormous fold of skin sprang from the ear, which was greatly elongated, and from the back of the head, covering the neck, chest, and abdomen, fell in voluminous folds like a mass of intestine. The patient when seated was obliged to carry the mass in her lap.

The localities from which these single tumors spring are the temple, the upper eyelid, the nucha, behind the ear and at the level of the last cervical vertebra, the chest below the breast to the hip, and, chiefly, the labia majora. In one case the growth sprang from the sole of the foot. The skin covering these lesions is normal or slightly pigmented, smooth, or rough and rugous. In consistence they are like a mammary gland to the touch.

Circumscribed fibroma molluscum is indolent and only calls for relief when the tumor is so large as to inconvenience the patient, when an operation may be required. Degenerative changes of an inflammatory or malignant character sometimes occur in the tumors of fibroma molluscum, particularly of the circumscribed variety.

The etiology of fibroma molluscum is obscure. Hebra has asserted that the disease occurs in persons of stunted mental and physical growth, and this is the experience of many writers, which has also been mine in the cases I have

observed. It is commoner among women than among men. Fibroma molluscum is a rare disease; only 86 cases were reported in the 112,775 cases of the American statistics.



FIG. 21.—FIBROMA MOLLUSCUM—DIFFUSE FORM. (After Recklinghausen.)

It is a curious fact, and one worthy of note, that in all cases of fibroma molluscum which have been examined *post-mortem*, new growths similar to those on the skin have

been found upon the main trunks of the nerves. It has been suggested that fibromata of the skin are originally neuro-fibromata, the nerves being at first present and then disappearing as the tumor grows and the connective tissue becomes prominent.*

The diagnosis of fibroma molluscum rarely presents any difficulty. The number and distribution of the lesions, the unchanged character of the skin covering the tumors, the variety in size and shape of the latter, and the pendulous character of the larger tumors, are all highly characteristic. From molluscum epitheliale the tumors are to be distinguished, by not having any depression or aperture upon their summits. In rare cases where this exists a comedo can be squeezed out of the opening. They are, moreover, situated in the skin, which is normal over them, whereas the lesions of *M. epitheliale* are nearer the surface of the skin, which is tightly stretched over them. The tumors of fibroma molluscum are distinguished from those of lipoma by the fact that the latter are soft and lobulated in structure. The diagnosis between fibroma molluscum and other hypertrophic growths of the skin is rendered difficult because our ideas regarding the line to be drawn between fibroma and such affections as dermatolysis, pachydermatocoele, and elephantiasis, are indistinct.

The prognosis of fibroma molluscum is favorable excepting for the possibility of malignant degeneration, which, though extremely unusual must be considered.

The treatment is limited to the removal of unsightly or discomforting tumors by the knife or the galvano-cautery loop.

Filaria Medinensis, sometimes called *Dracunculus*, or *Guinea-worm disease*.—An affection chiefly of tropical coun-

* The plate shows a case of multiple fibromata, in which fibrous tumors of the nerves (neuromata) were found after death.

tries, caused by a parasitic worm. It is particularly common along the west coast of Africa, in Senegal and Guinea, and in Egypt, Persia, and India. It has also been met with in the West Indies. Cases have likewise been reported as occurring in this country, but always in persons who have lived in tropical climates, with the exception of two cases occurring in the South and a third which I reported some years ago to the American Dermatological Association. The latter occurred in a Custom House employé of Philadelphia, who was born and had always lived in this city, but who handled invoices sent from the Orange Free State in Africa, one of the localities where the disease is endemic.

The appearance presented is sometimes that of a cord under the skin, often of a dusky red color, sinuous and slightly raised above the general level of the skin. At other times, especially when the pregnant worm is very much swollen and about to bring forth its ova, the lesion of the skin resembles a boil. Sometimes the parasite is single, at other times a great number, even hundreds, may exist under the skin, in the intermuscular areolar tissue and even in the parenchyma of some of the internal organs. The full-grown worm is from $\frac{1}{24}$ to $\frac{1}{12}$ inch in thickness, and varies from several inches to three feet in length, according to its age. The young worm, when of microscopic size, finds its way by boring into the skin and deeper tissues, and there takes up its habitat, growing gradually, for months, without attracting attention, until it attains a sufficient size to excite irritation and inflammation. The disease is usually contracted in low swampy places, by persons who go barefoot, and usually attacks the feet and lower extremities, though the exact mode of entrance is unknown. The treatment commonly employed in the countries where the disease is endemic consists in extracting the worm, inch by inch, and day by day, as soon as it makes its appearance on the surface, being careful not to

break the creature during the operation. Galvanism has also been applied with success, one pole of a battery being placed on the head of the worm, and the other held by the patient.

Among medicines iodide of potassium in moderate doses has been employed successfully, but the best treatment is that of Horton, by means of large doses of asafœtida (f5j-ij, twice daily). The late Tilbury Fox used this treatment with success, and in the case I have cited, the administration of pills of asafœtida, to the amount of forty-eight grains daily, caused the disappearance of the parasite (probably by death and absorption) within five days, after other modes of treatment had been employed without result for several months.

Filaria Sanguinis Hominis.—The microscopic embryo of a nematode worm, the *filaria Bancroftii*, found in the blood of many human beings in some hot countries. The female alone is known, as a thread-like worm two or three inches in length and $\frac{1}{90}$ inch in diameter. The embryos, as found in the blood, are $\frac{1}{75}$ by $\frac{1}{3500}$ inch. The eggs are $\frac{1}{1000}$ by $\frac{1}{1650}$ inch. They occur in most patients suffering from chyluria, lymph scrotum, and many cases of elephantiasis. Manson says that the parent worm, being located in some lymph channel of a patient, instead of throwing off the filariæ alive and with a diameter of $\frac{1}{3500}$ inch, aborts and throws off eggs before the embryo is fully developed; but the eggs have a much greater diameter than the filariæ, and they plug lymph vessels through which the latter would pass. The current being arrested, the vessel becomes distended behind the point of occlusion, and the result is lymph scrotum, chyluria, etc.

Certain mosquitoes, in drawing blood, take with it into their stomachs some of the filariæ, where the latter undergo changes and are deposited with the mosquitoes' eggs and fæces in water, where they may make further progress,

and finally be swallowed by a human being, and in this second host attain full development.* (See *Elephantiasis*.)

Fish-skin Disease.—(See *Ichthyosis*.)

Fissures in the skin are generally due to eczema. (See *Eczema*.) They commonly occur in places where the skin is rendered unusually brittle by inflammation, and at the same time is subject to flexure. The ends (pulp) of the fingers and flexures of the fingers and toes are common seats of fissures. Also the muco-cutaneous juncture of the mouth and anus, and the posterior part of the ear where it joins the scalp. The treatment of fissures is usually at first stimulant, and then protective. Chaps and fissures about the lips and anus should be slightly torn open, and then touched with a point of solid nitrate of silver or a sharpened splinter of wood smeared with a strong red oxide of mercury ointment, 40 to 60 grains to the drachm. Sometimes a ten per cent. salicylic rubber plaster kept over the fissure for some days will soften the edges so as to make the other applications more effective. Ointments containing tar are also useful, as described under eczema of the anus. Fissures behind the ears may be treated in the same manner, with a slightly milder degree of stimulation. Fissures occurring in the ends of the fingers may be treated by soaking in hot water, to soften the thick epidermis, and then rubbing in a ten per cent. solution of oleate of mercury, or, if painful, of equal parts of the ten per cent. oleate of mercury and oleate of morphia. If the cracks are deep, they may be touched with the solid nitrate of silver stick, after preliminary soaking in hot water, and may then be painted with a solution of gutta percha for protection. Or the

* The most recent views will be found in Lucas, "Des Manifestations Pathologiques dues a la Presence de *Filaria Sanguinis hominis* dans l'organisme Humaine," Bordeaux, 1892.

soaked finger ends may be rubbed with a 5-15 grain solution of caustic potassa, and then kept constantly wrapped in unguentum diachyli. I mention these various remedies, because what will suit one case will do no good in another. Each must be tried in turn; much perseverance must be exercised, and, at best, a very guarded prognosis must be given, especially in fissures of the finger ends. In some cases they seem, like dryness and brittleness of the hair and splitting of the nails, to be rather the expression of a constitutional peculiarity than a disease.

Folliculitis and Perifolliculitis.—If we examine all the inflammatory affections of the skin which have their focus in and about the cutaneous glands, we shall find that their number is very great. While it would be instructive to do this, however, from many points of view, it does not come within the scope of this work, and I shall confine myself to a few remarks upon those inflammations of the glands which have not been touched upon elsewhere in the present volume.

The typical folliculitis is that found in *sycosis coccigenica*, which will be found described under this head. Other forms are found in *keratosis pilaris*, in *pityriasis rubra pilaris*, and in some forms of *lichen*, and the *Acnitis* and *Folliclis* of Brocq.

Among the perifolliculites, those described as "*perifolliculites suppurées et conglomérées en placards*" are best known. They have been described by Leloir, Quinquaud, and others. The commoner of these forms is the acute and benign variety. Although not frequently met with in this country, I have seen a number of cases, and perhaps it is less uncommon than would be supposed.

The affection, when fully developed, is characterized by a raised roundish or ovalish patch, sharply defined and elevated from one-eighth to one-quarter inch above the general surface. The color of the lesion is a dusky, often

violaceous red, the surface is smooth or slightly mamillated, and is perforated with very numerous, minute, round openings, giving it the appearance of a sieve.

From many of these openings a drop of yellow pus exudes. Pressure upon the lesion causes the exit from all these openings of sero-pus, pure pus, or minute whitish granules. Sometimes sinuses or pockets of purulent deposit form in the neighborhood.

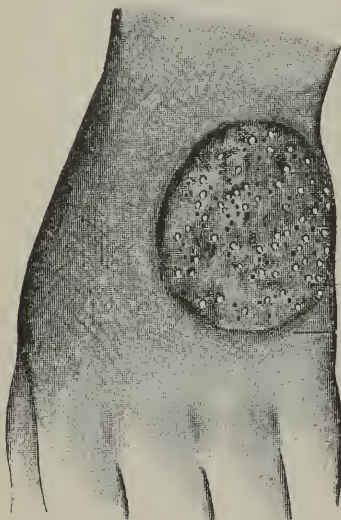


FIG. 22.—DISCOID SUPPURATIVE PERIFOLLICULITIS.

The hairs appear to be healthy; there is certainly no trichophyton, and a careful comparison between the description of this affection and that described under trichophyton tonsurans as "kerion" will enable a diagnosis to be made.

The affection is most apt to occur upon the back of the hand and the ball of the thumb, although it may occur elsewhere. It begins in the form of a patch of diffuse redness, or of small reddish elevations, pruriginous in character, which soon change into pustulettes. After seven or eight days the disease has reached its height. It then begins to decline, and usually finishes its course by the end of three or four weeks.

Anatomically the disease is a folliculitis and perifolliculitis of the lanugo hairs and of the pilo-sebaceous follicles. It probably owes its origin to the invasion of the staphylococcus pyogenes. Although benign and self-limited, a cure may be hastened by thorough cleanliness and dis-

infection, followed by the application of an antiseptic and astringent ointment.

Another form of the disease is the subacute, which is commonly like the former, only with a more marked presence of the purulent element. Other varieties are the phlegmonous, the anthracoid, the papillomatous, resembling "anatomical tubercle" (see *Tuberculosis cutis*), the pseudo-ulcerative, and the serpiginous. All of these, I think, are modifications of the first variety, caused by the deeper implantation of the staphylococcus pyogenes albus upon the milder disease. The treatment is essentially the same, but it should be more active.

Framboesia, called also *yaws*, *pian*, and *endemic verrugas*, is a contagious endemic skin disease, characterized by general and cutaneous symptoms, occurring in the West Indies and other tropical countries. The eruption consists of variously-sized papules, tubercles, and tumors, of a reddish or yellowish color. The lesion appears as a yellowish or whitish point or spot, which gradually enlarges and projects from the surface, looking, when fully developed, like a piece of cotton wick, a quarter of an inch or less in diameter, dipped into a dirty yellow fluid, and stuck on to the skin, in a dirty, crusted, brownish setting, and projecting to a greater or less extent. Or at times the lesions look like red currants, with flat tops, of a bright pink color, glassy, semi-transparent. Larger lesions look like cherries. The tubercles may be smooth, scaly, or ulcerated. The eruption generally manifests itself on the face, upper or lower extremities, and genitalia. The largest growths occur on the lips, eyelids, toes, and genital organs. The lesions are not painful or itchy. The disease is probably not hereditary.

Native observers long ago considered this disease contagious, but the fact of contagion was doubted by more scientific observers. As we now know that all diseases of

this class are contagious, the treatment which naturally follows would be directed toward thorough cleanliness and disinfection. A medicated soap should be used for purposes of ordinary cleanliness over the whole surface of the body at least once a day, and locally twice or three times a day. In addition to this the secretions should be dried off with absorbent cotton, dabbed with a one thousandth solution of bi-chloride of mercury, and then dusted with eucrophen, aristol, or some similar disinfectant. In some cases it may be desirable to cauterize the lesions, but this I think can hardly ever be absolutely necessary, because, like all the other papillomata, the removal of the cause will be rapidly followed by disappearance of the growth.*

Freckle.—(See *Lentigo*.)

Fungous Foot of India, called also *Madura foot*, *Podalcoma*, *Mycetoma*, etc., is a peculiar endemic disease of the skin and deeper tissues which prevails to a considerable extent in India, and of which cases have been reported as occurring in Mexico and in the United States. It appears to be unknown in Europe.

The disease is characterized by a tumor-like swelling occurring usually in one foot, more rarely in the hand or arm, and in one case in the shoulder, together with the formation of blebs or tubercles upon the surface, which become the point of exit of sinuses penetrating to the deeper tissues and giving exit to whitish granules or black roe-like masses, mingled with a sanious discharge.

It may attack individual segments of either hand or foot, as the toe or the finger. In fact, the palmar surface of the finger or thumb, and the plantar surface of the toe, or the

* An excellent work has been published recently by Numa Rat under the title of "Yaws, its Nature and Treatment."

See also Baven Rake, "Post-mortem Appearances in Cases of Yaws." (*Brit. Journal of Dermatology*, December, 1892.)

interspace between the toes, are often the first localities to be attacked.

The earliest signs of the disease are variously described as discoloration or induration of the skin in places, or as swellings, tubercles, knots, and lumps of various sizes; which are sometimes compared to boils, but are usually larger, non-sensitive, and either movable or apparently limited to the integument, or deep-seated and fixed. They are firm, indolent, and very slow in progress. Sometimes the swelling, even when superficial, is by no means prominent or defined, and when deep-seated it may be more perceptible to touch than to sight. Sooner or later vesicles or pustules appear, or more limited elevated points, and the former burst or the latter ulcerate; then there occurs a thin and scanty discharge in which the supposed fungous particles are at once to be found, and a fistulous opening remains, whence the latter continue to issue.

The origin of the disease is commonly attributed to the entrance of a thorn or splinter, or to a bruise inflicted upon the part. Investigation, however, has failed to demonstrate the origin of the affection, as from without it seems on examination to have invariably first shown itself at some little distance under the skin. The inoculation of the foot, however, does not in any case seem to have a strictly defined local mark. The first sign of the disease is revealed by its consequences, that is to say, commonly by a tumor which sooner or later communicates with the exterior, and then for the first time the so-called fungous particles or roe-like bodies appear.

The course of the disease is essentially chronic, the history of a case covering years rather than months, but occasionally, within even one year after its first outward sign, the growth may spread over a great part of the foot. It appears to spread by the prolongation of sinuses in the

direction of least resistance (though no tissue, not even bone, can resist the onset of the disease). At various points in these sinuses certain globular foci, containing peculiar gelatinous and granular constituents, form, and these sinuses and nodes multiply until the foot seems to be one mass riddled with holes. It is supposed on good evidence to be a form of actinomycosis.

The disease is always protracted in duration; four, six, or even twenty or more years may elapse before the foot becomes so entirely disorganized as to demand amputation. The affected foot may, in some protracted cases, exceed its fellow four or five times in bulk, and attain a weight of a dozen pounds or more.

Although the possibility of a spontaneous cure cannot be denied, yet no case of such a termination is on record. The tendency of the disease is to increase progressively. Unless it is destroyed by caustics or other destructive agents, or cut off by amputation, it tends to spread until the patient dies of exhaustion, or from some complication, as diarrhœa, dysentery, or anasarca. Irritation, as shown by inflammation of the lymphatics or enlargement of the inguinal glands, has not been observed, nor has anything like septic infection of the system been recorded, though I think this must occur in some cases.

Fungous foot may be confounded with Guinea-worm disease, elephantiasis, caries, struma, enchondroma, malignant tumors, tubercular leprosy, or with a conjunction of such diseases.

The treatment of fungous foot should include cleanliness and protection as prophylactic measures, with removal of the growth by scraping and cauterizing when localized, or by amputation when this is required. As there is no necessary limit to this disease, the stump should always be carefully examined after an amputation to see that the

affection has not penetrated to a point beyond that indicated by external appearances.*

Furuncle, commonly known as boil, is a deep-seated, inflammatory disease, characterized by one or more variously-sized, circumscribed, more or less acuminate, firm, painful formations, usually terminating in central suppuration. Boils may occur singly, or oftener in numbers. When they occur in successive crops the condition is known as furunculosis. The lesion, at first a small, ill-defined, reddish spot, situated in the true skin, and tender and painful from the first, soon becomes larger, slightly elevated, and shows a tendency to suppurate about its centre. It arrives at maturity in a week or ten days, and is then a slightly-raised, rounded, or pointed formation, with a suppurating centre, called the *core*. At times no centre of suppuration forms; it is then called a "blind boil." The size of a boil may vary from that of a split pea to a large coin. Its color is dusky red; it usually gives rise to a dull, throbbing pain, increasing in intensity until suppuration takes place, and then subsiding.

Though the boil may attack any part of the body, its favorite seats are the face, ears, neck, back, axillæ, buttocks, perineum, scrotum, labia, and legs. Sometimes it is accompanied by some general constitutional disturbance. Neighboring glands may be sympathetically enlarged.

Boils sometimes occur as complications or sequelæ of other diseases, *e. g.*, eczema. An acute attack of eczema often winds up with a crop of boils. Sometimes the boil tends to return again and again in about the same spot.

The causes giving rise to boils are various and sometimes obscure. Often they are the result of a low and depraved condition of the system. General debility, over-

* See Roux: "Traite Pratique des Maladies des Pays chauds," t. iii, *et seq.*, for further details.

work of a mental sort, excessive bodily fatigue, nervous depression, improper food, and irregularity of the functions of the body are among the common causes of boils. They are sometimes encountered, however, in persons apparently enjoying perfect health, and given to active and varied out-door exercise and amusement. The boils to which the hydropathist points with pride, as evidence that the peccant humors are being "driven out," are in reality the evil result of erroneous hygiene and regimen. Boils not unfrequently occur in the course of other diseases, as diabetes, chlorosis, fevers, uræmia, and septic pyæmia. Occasionally certain atmospheric conditions, prevailing chiefly in the spring and autumn, seem influential in determining the occurrence of boils, which at times appear to prevail as a sort of epidemic.

The diagnosis of furuncle is generally easy, the affection being familiar to every one. From anthrax, or carbuncle, it differs in only having one point of suppuration—the core—while the former has several or many such centres. The furuncle also is inclined to be rounded or acuminate; carbuncle is flat. Furuncle is small; carbuncle varies in size, from half an inch to three or four or more inches in diameter; furuncle is tender to the touch; carbuncle, though spontaneously painful, is not tender. Boils generally occur in numbers; carbuncle is commonly single. Now and then certain pustular syphilodermata resemble boils, but their indolence, painlessness, and darker, duskier color, together with the chronic slow course which they run when unaffected by treatment, will rarely give rise to difficulty in the diagnosis.

The successful treatment of boils is, at times, by no means easy. Each case demands careful study, with the view, if possible, of ascertaining the cause at work, and obviating this, if it can be done. The various functions of the body are to be carefully regulated. The diet should

be of good quality and varied. Wine and malt liquors may be prescribed in rare cases, and when the patient is not accustomed to their use. The regimen should be moderate and conducive to the general improvement of the system. Fresh air and out-door exercise are to be urged in most cases. Tonics are very often called for. Quinine in considerable doses, as much as sixteen grains per diem, and iron, alone or with strychnia, may be given. Cod-liver oil is also suitable in some cases. The *mistura ferri acida*, so often prescribed in eczema, etc., is useful at times.

Arsenic, alone or in combination with iron, is sometimes useful. The following is a convenient formula:—

R.	Liquor potassa arsenitis,	f℥j-ij	
	Vini ferri, ad	f℥iv.	M.

SIG.—Teaspoonful, three times a day, after meals,

Other remedies are: the sulphite or hyposulphite of sodium, in fifteen to thirty-grain doses, every two or three hours; sulphide of calcium, in doses of one-eighth to one-quarter of a grain every two hours; liquor potassæ, in ten to twenty minim doses, with a bitter infusion, as *calumba* or *quassia*; fresh yeast, in tablespoonful doses, three times daily; syrup of the hypophosphites of lime, iron, soda, and potassa; tar water, up to a quart daily, and phosphorus. My friend, the late Dr. Elliott Richardson, was accustomed to prescribe, with excellent effect, a lemon, the juice of which made into a strong lemonade was to be taken once a day, in the morning. Such are the remedies most usually relied upon in the treatment of furunculosis. No one can be recommended as a specific; what will do good in one case may fail in another.

Locally, one method of aborting the forming boil may be recommended; it is, when a hair is growing out of the centre of the boil to pull it out. This will sometimes check the further development of the boil. A fine-pointed

stick dipped in ichthyol should be thrust into the follicle immediately after epilation. The application of cold, in the form of powdered ice poultices, is recommended by Hebra. The use of caustics, as a red-hot needle, nitrate of silver, or a mixture of equal parts carbolic acid and glycerine, nitric acid, or acid nitrate of mercury, may be used to the apex of the forming boil. Since the *staphylococcus pyogenes aureus* has been ascertained to be the true cause of furuncles, parasiticide remedies have come into vogue. Dr. Louis J. Heitzmann, of New York, speaks very highly of salicylic acid applied in the form of a plaster :—

R.	Acid salicylic,	℥ ij	
	Emplast. saponat.,	℥ ij	
	Emplast. diachyli,	℥ j.	M.

This is to be applied spread upon a cloth as an ordinary plaster.

When the boil begins to discharge, a hole is cut in the plaster, to permit the escape of the products of suppuration.

A ten per cent. salicylic acid ointment well rubbed into the skin may be employed instead.

Ichthyol has been employed recently, rubbed into the skin in full strength. I have used a pigment of equal parts ichthyol and collodion with benefit.

Peroxide of hydrogen forms one of the best applications to follow incision when pus has once formed. It is said that under this application the pain ceases, and the separation of the core takes place painlessly. When the areola is of considerable size, a starch poultice may be applied, or a linseed poultice smeared with resin cerate, or when there is much pain, made with lead water. Boric acid should be added to all poultices, as otherwise the growth of the cocci is rather favored. Incisions should not be employed at any stage unless absolutely required, and then only with antiseptic precautions and subsequent antiseptic dressings. An incision sometimes carries the virus to new points.

Gangrene of the Skin.—(See *Dermatitis gangrenosa*.)

Geroscleroma.—(See *Rhinoscleroma*.)

Glanders, called also *Farcy* and *Equinia*.—A malignant, contagious disease, derived from the horse and manifesting itself, after a period of incubation, by grave, constitutional symptoms, with inflammation of the nasal and respiratory passages, and a deep-seated pustular, vegetating, tubercular ("farcy buds"), or hemorrhagic, ulcerative form of eruption. The disease is rare and frequently fatal.

The local treatment of glanders involves destruction of the virus by some cauterizing agent applied to each ulcer. Nitric acid, carbolic acid, chlorine water or peroxide of hydrogen are to be preferred. As the abscesses form they should be opened and kept constantly cleansed by injections of permanganate of potassium solution and by carbolic acid. Ulcers of the nostrils are to be touched and washed with carbolic acid solution and touched with tincture of iodine or solution of nitrate of silver. Internally, arsenic, nux vomica, carbolic acid, and especially iodide of potassium, are to be recommended, in addition to which, the general symptoms arising in each case are to be vigorously combated.

Glossitis.—(See *Mouth, Diseases of*.)

Glossy Skin.—(See *Atrophy of the Skin*.)

Goose Skin, called also *Cutis anserina*, *goose flesh*, etc., is a well known condition of the skin, marked by a prominence about the individual hair follicles, in acuminate papular form, sometimes covered with scanty epidermic scales, and usually penetrated by a hair. The condition is usually observed upon the trunk and the extensor surfaces of the limbs, and is the result of contraction of the cutaneous muscles surrounding the hair follicles and the cutaneous vessels. Like other forms of muscular contraction, cutis anserina is of a transient character, and this distinguishes it from the closely similar affections known

as "keratosis pilaris" and "mild ichthyosis" (see *Ichthyosis* and *Keratosis pilaris*), due to epidermic overgrowth and chronic in character. The usual causes of cutis anserina are sudden changes from heat to cold and *vice versa*, or strong moral impressions. The application of light friction in massage also produces the same appearance. See *Massage in Skin Diseases*. The condition is rather a physiological than a pathological one.

Guinea Worm Disease.—(See *Filaria medinensis*.)

Graying of the Hair.—(See *Canities*.)

Grocers' Itch.—Eczema of the hands and arms, due to the irritation produced by handling sugar.

Grutum.—(See *Milium*.)

Hæmatidrosis.—This affection, known also as *bloody sweat*, *ephidrosis cruenta*, *sudor sanguinosa*, *diapedesis*, etc., is a hemorrhage from the unbroken skin through the orifices of the sweat-ducts. There is, perhaps, no such thing as an actual pouring out of blood as a secretion of the sweat-glands, the hemorrhage in question probably occurring from the plexus of blood-vessels surrounding the glands into the ducts of these glands.

The affection, though excessively rare, is so striking as to attract universal attention, and, consequently, records of its occurrence are found, not only in medical, but also in historical works. A shallow skepticism, denying all extraordinary phenomena not coming within its own immediate observation, had, at the beginning of the century, swept aside all accounts of sweating blood as fabulous. More accurate observation has of late years established the fact that, under certain conditions, blood, in a more or less pure condition, may exude from the orifices of the sweat-glands. The mechanism by which this exudation takes place has not as yet, however, been satisfactorily explained, nor is it likely to be explained until we know much more, both of the physiology of the sweat secretion and of the circula-

tion of the blood. A hemorrhage takes place from the capillary plexus about the gland coil and into the gland duct, but whether this is the result of passive dilatation, increased blood pressure, alteration in the structure of the vascular walls, or in the composition of the circulating fluid, cannot, in the present state of our knowledge, be positively stated. The process has some points of resemblance with that which goes on in purpura (see *Purpura*).

As regards the appearances presented to the eye, these vary in different cases reported. Sometimes blood oozes or spurts from the uninjured and unchanged skin. At other times an erythematous patch first forms, or a thin scale, which is later lifted up by the sanguineous exudation beneath. In some cases a miliaria-like, vesicular eruption precedes the diapedesis.

Hæmatidrosis may occur in either sex, and among those apparently in the enjoyment of good health as well as among those who belong to "bleeder" families, or who are in a low state of vitality. In many cases the affection occurs in connection with vicarious or disordered menstruation. At other times it may occur as the result of an impoverished condition of the blood, or from sudden and strong moral impressions, as fright, anguish, etc.

At times fever with high blood-pressure precedes the effusion, while at other times a state of depression with slow pulse ushers in the phenomenon. Occasionally the affection is one of a number of symptoms connected with purpura.

The diagnosis of the disease presents no difficulty, excepting in those cases in which simulation may be suspected.

The treatment of the disease must in many cases be purely empirical, and be directed by circumstances. When, however, there are indications of increased excitement and vascular tension, the abstraction of blood by a vein or some other method of reducing blood pressure is called

for. Closely allied to hæmatidrosis is the curious affection known as *Stigmata*. (See *Feigned Diseases of the Skin*.)

Tears of Blood are sometimes observed. Such cases have been reported by Damalix, Hasner, and Brun. (*Med. Record* and *Weekly Med. Review*, about 1890-'92) In these cases the eyes filled quickly with the bloody tears, the sanguineous character of which was demonstrated by microscopical examination. This affection is to be carefully distinguished from hemorrhages dependent upon orbital or conjunctival disease, such as polypoid conjunctival vegetations developed in the culs-de-sac of the conjunctiva. Genuine bloody tears are quite independent of any ocular or conjunctival disease, and their appearance is irregular. No apparent cause leads to their effusion. In some cases the escape of the tears is unattended by pain. In others the patient experiences pain in the forehead, the eyebrow, and at the root of the nose, or a sensation of pruritus, formication, or heat in the eyelids. These morbid sensations persist only a few instants and disappear with the appearance of the tears; the escape of the tears continues only a few minutes and the quantity of sanguineous lachrymal secretion varies from a few drops to a wineglassful. The phenomenon is usually intermittent, sometimes regular, but almost always transitory and attended by hemorrhages from various cutaneous or mucous surfaces. Sanguineous lachrymation appears, by preference, in anæmic individuals, in those inclined to hæmatophilia and in hysterical women.

Hair, Diseases of.—Some of these will be found treated of under the heads of *Alopecia hypertrichosis*, *Nævus pilosus*, *Canities*, with the fungous affections, *Tinea tonsurans* and *Tinea favosa*. The affections to be treated here are those which involve the structure of the hair-shaft itself. Excepting for the fact that they are disfiguring and annoying to those affected, the diseases here to be considered would scarcely merit attention, were it not that the careful

study of such changes and diseases of the appendages of the skin are calculated to assist in the solution of the general problems of pathology.

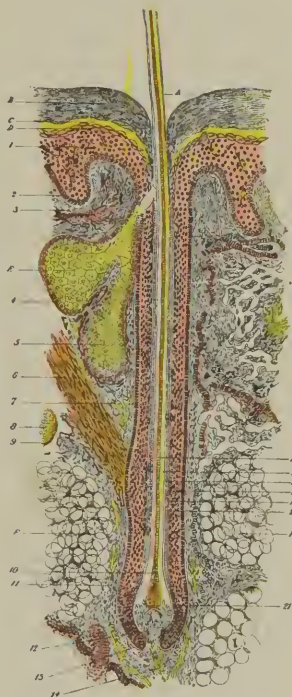


FIG. 23.

1. Mucous layer of the epidermis. 2. Basal pigment cells. 3. Papillary layer of the corium.
4. Continuation of basal rete cells. 5. Sebaceous gland. 6. Muscle of the hair. 7. Nerves. 8. Blood corpuscles. 9. Transverse section of blood vessel. 10. Root of hair. 11. Hair follicle. 12. Papillary vessels. 13. Papilla of hair. 14. Nerves. 15. Medullary substance of hair. A. The hair. B. Stratum corneum of the epidermis. C. Stratum lucidum of the epidermis. D. Stratum granulosum of the epidermis. E. Sebaceous gland. F. Panniculus adiposus. 16. Cortical substance of the hair. 17. Cuticle of hair. 18. Henle's layer of inner root sheath. 19. Huxley's layer of inner root sheath. 20. Outer root sheath.

That disease of the hair which is most frequently observed is atrophy, *Atrophia pilorum propria*. Whether or not a true progressive and morbid diminution in bulk of the hairs takes place, it is certain that their physiological

term of life may, under some circumstances, be diminished. The hairs lose their normal condition, become dry, lustreless, rough, brittle, cleft, and fibrillated; they swell out and break off. These changes often take place as the result of morbid processes occurring in the parts from which the hairs arise—their follicles, the sebaceous glands, or the cutaneous structures immediately adjoining. After fevers and other severe constitutional disturbances, likewise, the hair may become dry and lustreless, and tend to fracture and splitting.

In addition to these conditions which affect the hairs in general, there are several forms of atrophic structural alteration which must for the present be termed idiopathic, because we cannot assign any cause for them.

One of these is the well-known phenomenon known as *scissura pilorum*, in which the hairs become split up at their extremities. In some persons, particularly in females with long hair, or men with long beards, nearly all the hairs split up in this way. But this splitting is probably without significance, and does not affect the growth of the hair.

Duhring has reported a single case of an "undescribed form of atrophy of the hair of the beard," characterized by atrophy of the hair bulb and by splitting of the hair substance. To the naked eye the affected hairs varied in size and form, some having a uniform diameter several times greater than normal, while others throughout their length were unusually slender. The bulbs were in nearly all instances smaller than normal, and had a markedly contracted look. Not infrequently the diameter of the bulb and root were considerably less than that of the shaft. The majority of the hairs showed splitting into two, three, or more parts throughout their entire length. Under the microscope, atrophy of the bulbs and fission of the hair substance were the conspicuous features. In the majority of the specimens the bulbs were distinctly shrunken and

atrophied, appearing as small, contracted points or knobs. The hairs, as a rule, began to split within the bulb.

Another decidedly pathological condition is that to which, at first, the rather cumbersome name of "swelling and bursting of the hairs," was given, but which is now called *tricorrhexis nodosa*, the name by which this affection is now generally known.



FIG. 24.

This affection is usually confined to the hairs of the beard and the eyebrows, though at least one case has been observed in which the hairs of the scalp were involved. The affected hairs show exceedingly small, somewhat transparent or glistening, conical swellings. There may be one, two, five, or more on the same hair shaft; the little nodes being placed at various distances from one another, like

pearls on a string. On a slight examination they might be taken for ova adherent to the hair, but on closer inspection they are found to belong to the hair itself, and do not consist of adherent masses.

Some hairs have a conical, or fan- or brush-shaped enlargement at the end of each, and if this occurs on many hairs, on the moustache, for instance, the impression is conveyed that the hair has been singed by a flame, and has curled up at the burned end. The hairs thus affected are firmly fixed on their papillæ, but break easily at the seat of the swellings. The stump of the hair which remains shows the lower half of a node as its extremity.

Microscopic examination shows the nodes to consist of spindle-shaped swellings produced by a splitting asunder of the fibres of the hair structure, so that the appearance presented is that of two besoms or birch brooms rammed end-to-end together. It would seem that a separation or swelling takes place in the body of the hair, and that this produces a lighter color in the hair at the nodal points, as seen by reflected light, while the splitting takes place at a later stage of the disease.

The cause of the disease is not known. Some observers have considered it due to a parasite invading the hair, while others have thought the swelling and bursting of the hair to be due to the development of air in its tissues. The process itself is in all probability an atrophy.

This latter designation is particularly appropriate to the form of disease described under the name of "A Rare Nodose Condition of the Hair," which, while presenting certain analogies with trichorrhexis nodosa, differs from that disease in several important particulars. In the cases reported there was the formation of nodose swellings, or rather of atrophies, with the presence of a nodular appearance in the intervals, the altered hairs occurring in multitudes on the scalp, while trichorrhexis nodosa is almost

invariably found in the beard and not on the scalp. When traction is made on the hair a break occurs invariably *between* the nodes, while in trichorrhexis nodosa the fracture occurs through the nodes. Another point of difference between this affection and trichorrhexis nodosa is that in the former the nodes are opaque, and constitute the darkest part of the hair, while in the latter they are invariably white.

There is a great disproportion between the swollen and constricted portions of the hair. The average width of the nodes is two and a half times that of the narrow internodes. In trichorrhexis the diameter of the hair shaft is not increased to any appreciable extent, and any enlargement that is to be seen is due to the loosening and separation of the fibres. The nodes are very numerous, and succeed each other like beads on a necklace. The condition is very rare.

Under the name *tinca* or *trichomycosis nodosa* a peculiar condition of the hairs of the moustache and axilla has been observed. To the naked eye the hair appears thickened and rough, with some incrusting material, and here and there nodular swellings, sometimes hard and glistening, and in other cases soft. Numbers of hairs are broken off short, with brush-like ends. Under the microscope the roughness and thickening are seen to be due partly to an irregular incrustation of granular-looking material around the shaft, and external to it, and partly to the swelling of the shaft itself by the incipient separation of the fibre cells of the cortex.

These incrustations or nodules have been found to be composed of an aggregation of the zoöglea-form of a species of bacterium.

The so-called red chromidrosis is in reality a parasitic disease. The hairs are surrounded at various points with closely adherent irregular masses of a red or yellowish-red

color. On microscopic examination these are found to be composed of parasites (bacilli or micrococci) the exact nature of which is not known.

Some writers have considered the affection as a species of *leptothrix*. The hairs of the axillæ are those most commonly affected, but I have seen the disease on the downy hairs of the cheek. Hartzel, of Philadelphia, has recently published an interesting paper on this subject.

Piedra (Spanish for "stone") is the name of a peculiar affection of the hairs of the head in women, occurring only in certain parts of South America. It is characterized by the formation of minute black nodes along the hairs which rattle like stones when the hair is combed, and which are so intensely hard that great difficulty is experienced in attempting to cut one, the knife slipping to one side or the other, and finally breaking the node if considerable force is used.

Under the microscope the appearance seen is that of a honeycomb mass, consisting of spore-like bodies deeply pigmented on the surface. The mass appears to originate from one cell that grows by budding, not only laterally, but in every direction, forming radiating columns of spore-like bodies. As soon as the mass has grown to a certain size, the surface cells seem altered in shape, becoming darker in color, and forming a pseudo-epidermis. It is supposed to be fungoid in character, probably due to some fungus of the genus *ascomycetes*.*

Knotting of the hair, due to some peculiar change in the condition of the shaft, has been observed by Bulkley and others. The knots may at times resemble the nits of pediculi.

* "Beigel's disease," which shows itself in the form of dirty brown masses strung along the hairs used formerly in "chignons" of false hair, is parasitic in character, and probably similar to *piedra*.

Occasionally a peculiar condition of the hairs of the pubis and axillæ is observed, where amorphous, yellowish, reddish, or brownish masses are found clinging to the hairs along a greater or lesser portion of their length. These are in all probability concretions of some of the sebaceous and sweat secretions, or their derivatives, or masses of some hitherto undescribed fungus.

The treatment of the various forms of hair-shaft disease is unsatisfactory. Tricorrhæxis nodosa, and probably the other affections described, are best treated by frequently repeated shaving, though this often proves only a temporary relief. The following ointment has been employed with success :—

R	Pulvis zinci oxidi,	gr. xvj	
	Flor. sulphuris,	ʒ ss	
	Ung. adipis,	ʒ ij-ʒ iv.	M.

SIG.—Rub in morning and evening.

I cannot say that this promises much, but it is the best we have. When fragilitas crinium is connected with a generally debilitated condition of the hair, arsenic and cod-liver oil may sometimes be of use by improving the general nutrition.

Heat, Prickly.—(See *Miliaria*.)

Hemiatrophia facialis.—(See *Atrophy of the Skin*.)

Hereditary Syphilis, Skin Affections in.—(See *Syphilis, Hereditary, Skin Diseases in*.)

Herpes.—A skin affection, characterized by the appearance of one or many discrete, transparent vesicles, varying from the size of a pin-head to that of a small pea, commonly occurring in groups or clusters and seated on an inflamed base. The eruption is apt to occur along the line of distribution of nerves. The lesions run a pretty uniform course, lasting from eight to ten or fourteen days. The clear serous contents of the vesicles first become clouded and then gradually dry up, with the formation of yellowish crusts, which fall off, leaving transitory spots of pigmen-

tion. The appearance of the eruption is usually preceded or accompanied, or both, by more or less burning, and, in the case of herpes zoster, by pain either localized in the eruption or distributed along the line of the nerve supply.

There are three forms of herpes: *H. simplex*, *H. progeneritalis*, and *H. zoster*. The affection known as "herpes iris" on account of its herpetiform lesions, is a variety of erythema multiforme, under which head it will be found described.

The three forms of herpes are so different in their location and course that they are usually described as entirely separate and distinct diseases. *H. zoster*, for instance, never, or at least only rarely, recurs in the same individual. *H. simplex* may recur at any time, and in some cases does recur periodically, while *H. progeneritalis* recurs inveterately in some cases.

But there is some link of union between the affections, in addition to their close adherence to the herpetic type of lesion, and to their occurrence along the distribution of nerves, and as a result of nerve-ganglionic or reflex causes. This is shown by the fact, occasionally observed, of the simultaneous occurrence of the different forms of herpes. I had under observation some years ago a case in which well-marked herpes zoster of the front of the neck and cheek was accompanied by a characteristic *H. simplex* (var. labialis), "fever blisters." Another case, also under observation at the same time, showed a simultaneous outbreak of *H. zoster* of the buttock and *H. progeneritalis*.

Herpes Simplex.—This form of herpes was formerly known as *H. labialis* or *H. facialis*, but this designation is too narrow, as the eruption may be, and frequently is, met with in other parts of the face—the cheeks, *alæ nasi*, eyelids, and ears being occasionally attacked, and is also, though rarely, met with on the body or limbs. Occurring about the lips and nose, the eruption is popularly termed "fever blister" or "cold sore." There is a form of

herpetic eruption about the tonsils and adjacent parts, accompanied by high fever, and occasionally appearing epidemic in character, which closely resembles the so-called "follicular tonsillitis," but may readily be distinguished by the strictly herpetic character of the lesions.

When the lips are attacked by herpes simplex, one only is usually affected, the lesions commonly occurring at the boundary between the skin and mucous membrane. The lower lip is most frequently attacked. The lesions here not infrequently coalesce and form a bleb. The contents of the vesicles dry up within from three to six days, and form brownish or yellowish crusts which loosen and fall off spontaneously. When the crusts are prematurely detached the cure is delayed.

Herpes of the lips is a frequent concomitant of various general disturbances. Slight ailments of the digestive organs, affections of the chest, as pneumonia or pleurisy, malarial fevers, etc., are often accompanied by an outbreak of herpes of the lips. This was formerly believed to be of critical significance, but is now thought to have no connection with the course or severity of the dominant affection. I think, however, that the old view will be found correct. Some women have an eruption of herpes on the lips before, during, or after each menstrual period. Eruptions of herpes of the lip are observed repeatedly following the use of a dental instrument in filling the teeth.

Herpes may occur upon the mucous membrane of the tongue and of the oral cavity generally. The lesions here lose their vesicular character, because the epidermic cover is macerated away almost as quickly as it forms, and a shallow ulcer, the well-known "canker" of the mouth, results. (See *Aphthæ, Dermatitis herpetiformis and Mouth, Diseases of*.)

Herpes of the nostril and alæ nasi is a frequent result of a cold in the head. It presents no peculiarities other than those mentioned in speaking of herpes of the lips.

Herpes of other parts of the face is sometimes quite a striking affection. The following case will give an idea of its appearance and course:—

A hackman was exposed during the greater part of a raw, inclement night without adequate clothing. Returning home at daylight, he washed his carriage and then, thoroughly exhausted and chilled through, flung himself down in his wet clothing and slept for several hours. On waking he had a severe chill, followed by feverishness and general soreness about the limbs, which, however, did not confine him to bed. Forty-eight hours later, on shaving in the morning, he began suddenly to experience a burning sensation in the face, which soon swelled up and displayed numerous incipient vesicles. The sensation of burning continued to grow more severe until the patient was deprived by it of sleep. The affection reached its height in about three days, when the whole face was covered and disfigured by a copious eruption of discrete vesicles, with clear or cloudy contents, grouped chiefly about the lips, the angles of the mouth and nose, and to some extent upon the cheek and chin, a few scattered lesions being also seen elsewhere. The vesicles were seated upon inflamed bases, and these centres of inflammation coalesced and caused such a swelling of the lips and the skin as to make the features and expression almost indistinguishable. On the mucous surface of the lips within were numerous herpetic ulcers. Under appropriate local treatment the eruption quickly subsided, and at the end of ten days the patient was well.

Herpes simplex is almost unquestionably a neurosis of the skin. Although in no case has any anatomical change in the nerve trunks, in the ganglia, or in the nerve centres, been found, as in *H. zoster*, to account for its occurrence, yet the facts that it is found in the areas of distribution of certain cutaneous nerves, that it resembles so closely *H.*

zoster, and that it seems sometimes to occur as the result of reflex impressions, all point to a nervous origin.

The diagnosis of herpes simplex is rarely difficult. The peculiar discrete character of the eruption, the well-filled vesicles, each on a more or less inflamed base, sometimes coalescing in the later stages, but always showing the character of distinctness, the fact that the group of lesions is sharply defined, and also that the lesions tend to dry up in their entirety rather than to run together, point toward the disease in question. Moreover, the fact that herpes runs a regular and strictly limited course is highly characteristic.

Herpes upon the line of junction between the skin and mucous membrane, and upon the mucous surface of the lips, especially when it occurs near the commissure, may sometimes be mistaken for the initial lesion of syphilis or for mucous patches.

From the initial lesion of syphilis, herpes is distinguished by its more superficial character and the absence of infiltration, as well as by the absence of glandular involvement, the submental and other neighboring glands being invariably involved in connection with the syphilitic lesion.

Mucous patches in the oral cavity are sometimes mistaken for herpes, but the mucous patch is almost always much larger and more superficial, with a squarish outline and a flat gray floor, with usually a narrow red border. The herpetic ulcer is small, circular, or "polycyclic" in outline, and concave, with sharply-defined edges.

Herpes upon the skin of the face may be mistaken for herpes zoster and for eczema, and, possibly, in rare cases, for dermatitis venenata. From H. zoster it is distinguished by the absence of neuralgia and the more diffuse outline of the grouped lesions. Moreover, herpes zoster never, in my experience, attacks the opening of the nostrils or the muco-cutaneous juncture of the lips. H. simplex facialis likewise runs a more rapid course than H. zoster.

Eczema vesiculosum of the face is always marked by the fact that the commingled lesions run together, and are never made up of discrete vesicles. There is also an absence of the red base observed in the lesions of H. facialis, and in eczema some characteristic lesions are almost always found in places rarely or never attacked by herpes. Finally, the course of an eczema is not a brief and limited one like that of herpes, but tends rather to an irregular and often chronic prolongation.

Dermatitis venenata shows lesions often resembling those of herpes, but the distribution is almost invariably different, and the tendency to spread and to appear in other localities is quite marked. There is, furthermore, in dermatitis venenata almost always a history of exposure to the emanations of the poison vine.

The *treatment* of herpes simplex is very simple, being confined to the local use of soothing and emollient applications. In herpes of the lip a little cold cream, or diluted oxide of zinc ointment, is usually all that is required. Sometimes the oleate of bismuth ointment (see McCall Anderson's ointment, under Eczema), with the addition of eucalypti or some other antiseptic, is useful. Care must be taken not to detach the crusts prematurely, as this lengthens the duration of the affection. In cases of extensive herpes of the face, like the one described above, a soothing application, as a poultice of bread crumb and dilute lead water, sprinkled with powdered boric acid, will give relief, a mild ointment being substituted for this when the crusts begin to form.

The *prognosis* is very favorable in all cases of herpes simplex, the affection running a definite course. Its duration, however, cannot be shortened, and all the popular remedies for cutting short an attack of herpes of the lip must fail, except in cases in which the lesions themselves are abortive and ephemeral.

Herpes Progenitalis is found on both males and females. The vesicles are usually four to six in number, varying in size from that of a pin's head to that of a split pea. They occur usually close together and are apt to coalesce. The whole area covered by the group of lesions is rarely greater than that of a ten-cent piece, or, at most, a quarter-dollar. The parts usually affected are, in the male, the preputial sulcus, the lining of the prepuce, the glans, the margin of the prepuce, and, more rarely, the shaft of the penis. Now and then herpes of the mucous membrane of the urethra is met with, when a discharge, liable to be considered gonorrhœal, accompanies it. This condition may account for some of the cases of "clap" occurring in males who have never indulged in sexual connection.

Occasionally severe neuralgic symptoms accompany the outbreak of genital herpes in the male, having often no relation in intensity to the severity of the skin eruption. A single vesicle may be present in connection with excruciating neuralgic pains, not confined to the penis only but radiating to the perineum, buttock, thigh, and leg. Unfortunately this distressing variety of herpes genitalis is apt to be recurrent. In women, herpes progenitalis is uncommon, excepting among prostitutes. The lesions are found upon the labia minora, prepuce of the clitoris, labia majora, clitoris, introitus vaginæ, and, more rarely, on other neighboring parts. The attention of the patient is called to the eruption by a slight itching and burning sensation; a small, red patch is observed, on which a crop of vesicles, at first clear, but soon becoming purulent, is seen. If situated on the mucous membrane the vesicle soon breaks down, so that the lesion which is, in fact, first noticed is a superficial erosion. Unless irritated, the lesions tend to heal within a week or two. The tendency to relapse is very marked. In the female it may recur with each catamenial period, while in the male each coitus may be followed by an outbreak.

Venereal diseases of a non-syphilitic character, as gonorrhœa and balanitis, seem to predispose to the occurrence of the affection. It is much more common in the male, during the period of youth and early manhood, but in the female may occur up to middle age. Herpes progenitalis is apt to be mistaken for chancroid. In the earlier stages, subsequent to the opening of the herpetic vesicle, indeed, the individual lesions are almost identical in appearance in both diseases.* The number and distribution of the lesions is a great help. The lesions of chancroid are not so numerous as those of herpes, and are not grouped together in the way the latter are. When multiple, the lesions of chancroid are the result of auto-inoculation, and are, therefore, of different ages. Time, also, shows the difference. After a few days the herpetic sore begins to get better, while the chancroid is getting worse.

DIFFERENTIAL DIAGNOSIS

BETWEEN

HERPES PROGENITALIS.

1. Always begin as vesicles (though these very quickly break down).

2. Appear in groups.

3. Outline of larger patches "polycyclic," that is, made up of circles intersecting one another.

4. Always or almost always multiple.

5. Lesions always superficial.

CHANCROID.

1. Usually begin as ulcers.

2. Ulcers do not group.

3. Outline of lesion smooth, roundish, or ovalish. Never "polycyclic."

4. Single or few in number.

5. Lesions deep.

* Not infrequently, the chancroidal virus is inoculated upon the herpes lesion and occasionally a genuine herpes progenitalis may be seen displaying its characteristic features, these changing afterward to those of chancroid and later assuming the appearance of the initial lesion of syphilis and followed by the generalized lesions of that disease. I have watched this curious procession at times and have been obliged to revise my diagnosis once and again with the changing appearance of the lesions as their evolution proceeded.

HERPES PROGENITALIS.

CHANCROID.

6. Last but a few days.
7. Almost always a history of previous attacks. Exceedingly prone to relapse.
8. Lymphatic glands not enlarged.
9. Preceded often by burning and itching.
10. May or may not be caused by simple irritation in connection, and in women occurs sometimes about each menstrual epoch.

6. Last for over a week.
7. Not prone to repeated attacks.
8. Lymphatic glands enlarged and sometimes inflamed and suppurate.
9. No premonitory symptoms.
10. Caused by impure connection.

The syphilitic initial lesion need not often be confounded with the herpetic vesicle. It does not begin as a vesicle; it is seldom multiple; it is indurated at some time in its course; is accompanied by indurated glands, and does not appear as a sore until some days after the exposure.* In the female the later syphilitic lesions may sometimes be mistaken for herpes, and *vice versa*. The same principles of diagnosis which come into use in distinguishing herpes from the other affections above mentioned, will, however, be found of service in such cases, and in any case careful observation of the lesions for several days will much assist the conclusion. Eczema of the genitalia may resemble herpes, but the itching and generally severe and more extensive character of the eczematous disease serves to distinguish it.

Herpes progenitalis usually requires very little treatment. Sometimes, however, various remedies are required. The best remedy for ordinary use is dilute lead water, applied

* In herpes pressure between the thumb and finger will cause a drop of serum to exude, while in chancre this usually does not occur, or can only be brought about with difficulty.

on a soft piece of linen or a wisp of absorbent cotton. Black wash is a good dressing in many cases; or finely-powdered nitrate of bismuth may be used. Sometimes more stimulating applications are required. Powdered calomel, sprinkled on the erosions morning and night, or equal parts of calomel and oxide of zinc may be used. When the disease is prone to recur, astringent washes may be employed as a prophylactic. Circumcision is sometimes useful in inveterate cases occurring in the male, but even this has been known to fail.

Herpes Circinatus.—(See *Herpes iris* and *Tricophytosis circinata*.)

Herpes Gestationis.—A rare affection of the skin peculiar to pregnancy. It consists in the development of erythema, papules, vesicles, and bullæ, vesicles predominating. They are attended with intense itching and burning sensations. They are commonly grouped, but do not follow any nerve tracts. The vesicles and bullæ vary in size; they may be pea-sized or as large as a walnut. The lesions usually first appear on the extremities, and afterward involve other portions of the body. It is an affection directly dependent upon the gravid state of the uterus. It may appear at any period of gestation up to the seventh month, and, when present, usually continues until after delivery. It does not terminate its course immediately after delivery, but slowly retrogrades by the development of fewer and fewer vesicles; it is apt to recur with succeeding pregnancies. It is at times accompanied by urticaria, neuralgia, and other neurotic affections. It appears to be a form of *Dermatitis herpetiformis* (q. v.).

Herpes Iris.—(See *Erythema iris*.)

Herpes Progenitalis.—(See *Herpes*.)

Herpes Pruriginosus.—(See *Dermatitis herpetiformis*.)

Herpes Tonsurans.—(See *Tricophytosis tonsurans*.)

Herpes Zoster is an acute inflammatory disease, char-

acterized by groups of vesicles, situated upon inflamed bases, usually accompanied by more or less neuralgic pain. The pain usually precedes the eruption, sometimes by several days. It is apt to be disproportionate to the amount of eruption. Occasionally it is entirely absent. The eruption makes its appearance in the form usually of an inflamed condition of the skin, attended with heat and burning sensations, and groups of discrete pin-head to split-pea sized vesicles, situated on a bright-red surface, appear over the region. The vesicles are often crowded

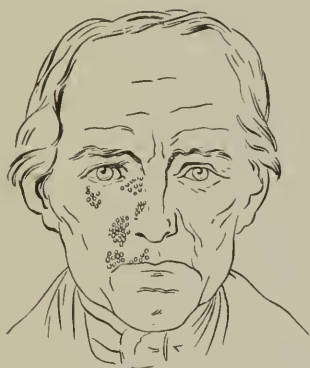


FIG. 25.—HERPES ZOSTER FACIALIS.
(After Bärensprung.)



FIG. 26.—HERPES ZOSTER LABIALIS.

together so as to coalesce, forming irregular patches. New vesicles continue to appear until the fourth, or as late as the eighth, day, when the eruption is at its height; it remains in this way a few days, and then begins to decrease, the vesicles shriveling, and by the tenth day or so are dried up, leaving brown crusts, which drop off. The vesicles do not burst, as do those of eczema. Ten days to three weeks is the average duration of an attack. The eruption does not always run a typical course. Only a few vesicles may appear, or they may abort before fully developing. On the other hand, they may suppurate and

leave scars, though the disease commonly leaves no trace. The neuralgia varies from a very slight tingling to the most excruciating pain. Herpes zoster may attack any part of the body. It is commonly found upon the trunk and head; less frequently upon the limbs. It follows very closely the course of the nerves, and the eruption is named according to the region upon which it occurs, as *H. Zoster capitis*, *H. Zoster brachialis*, *H. Zoster facialis*, etc.* On the head it most frequently occurs in the course of the supra-orbital nerve, and it may affect the eye, giving rise to severe pain. On the head, both sides are sometimes affected; elsewhere the affection is almost always unilateral, so as to give rise to a popular superstition that if the "shingles" (occurring on the trunk) should go all the way round the body the patient would certainly die.† The chest is the commonest seat for the occurrence of the eruption; and the names formerly given to the disease, "zona," "cingulum,"—a girdle, indicate this. Involving the intercostal nerves, the neuralgia often causes the affec-

* A division of the various forms of herpes zoster according to the affected nerves has been made, which is convenient for reference.

These forms are the following:—

1. *H. Zoster facialis*; (*a*) labialis.
2. *H. Zoster occipito-collaris*.
3. *H. Zoster cervico sub-clavicularis*.
4. *H. Zoster cervico-brachialis*; (*a*) brachialis.
5. *H. Zoster dorso pectoralis*.
6. *H. Zoster dorso-abdominalis*.
7. *H. Zoster lumbo-inguinalis*.
8. *H. Zoster lumbo-femoralis*.

The illustrations appended, which are taken from Barendsprung's classical paper, give most of these forms, together with several other varieties. They will be found of diagnostic value, as the distribution of the disease often throws light upon its nature.

† Like many other "popular superstitions" it is not unlikely this may be found one day to be based on practical observation.

tion to be taken for pleurisy, until the eruption makes its appearance.

Dr. R. G. Curtin, of Philadelphia, pointed out to me, some years ago, that in all probability some cases of pleurisy are in reality cases of herpes zoster. He has since written upon this subject. Arnaud ("Zona intercostal, prodrome de la tuberculose pulmonaire." *Marseille Méd.*, Jan. 15, 1890?)

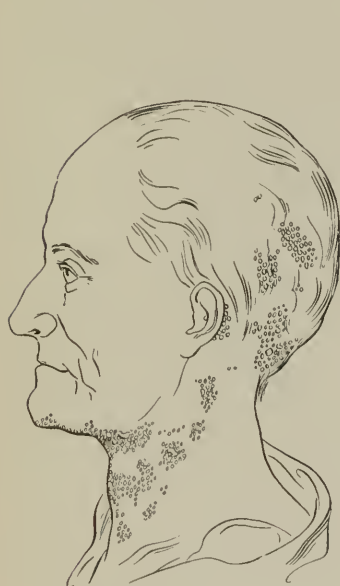


FIG. 27.—HERPES ZOSTER OCCIPITO-COLLARIS.



FIG. 28.—HERPES ZOSTER CERVICO-SUB-CLAVICULARIS.

reports six cases where herpes zoster preceded the occurrence of pulmonary tuberculosis in neurotic patients.

Leudet (*Ann. de Derm. et de Syph.*, T. VIII, No. 1) reports a case where herpes frontalis occurred in a consumptive patient who died nine months later. Examination *post-mortem* showed lesions in the Casserian ganglion and alterations in the nerve fibres.

Barrie (*Gaz. Heb. de Méd. et de Chir.*, 1887) thinks that the neuralgic pains of chronic tuberculosis are probably in some cases connected with herpes zoster. He reports three

cases occurring in the region of the perineum and external genitals. Herpes zoster may occur, in connection with tuberculosis, in any part of the body, but, according to Barrie, whatever its seat, it arises from a tubercular meningo-myelitis, or more frequently is the result of a peripheric parenchymatous neuritis. When it occurs on the limbs the flexor surface is commonly attacked. It rarely occurs below the knee.

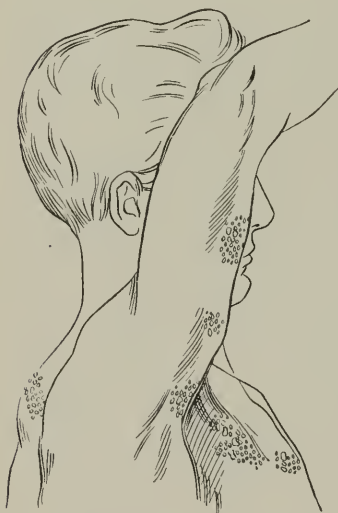


FIG. 29.—HERPES ZOSTER CERVICO-BRACHIALIS.

The course of herpes zoster is acute, and, though somewhat variable as to duration, it tends to recovery. It rarely

occurs twice in the same person. Now and then, however, cases are met with where it recurs year after year, perhaps six to nine times. Its etiology is obscure, but it is well



FIG. 30 —HERPES ZOSTER BRACHIALIS

recognized that the disease is dependent upon a peculiarly irritable or inflamed condition of the cutaneous nerve trunks and branches, or peripheric fibres. In some cases

the disease consists in an inflammation of the spinal or other ganglia, the influence of which is carried forward, along the nerves, to their termination upon the skin.

Of late years the opinion has been gaining weight that herpes zoster is a much more complicated affection than has hitherto been supposed. The pathogenesis of the lesions has been supposed to depend (1) upon a vasomotor disturbance; (2) upon a trophic nerve disturbance; (3) upon a trophic action of the sensory nerves; (4) upon a propa-



FIG. 31.—HERPES ZOSTER DORSO-ABDOMINALIS.

gated neuritis. The reinoter causes are somewhat better understood. Not only is septicæmia known to be the origin of some cases of herpes zoster, but the occurrence of the disease at certain times of the year, and in groups and families of human beings, seems to point to a specific infection. The rarity of its recurrence is another argument in favor of this view.

My own opinion is that there is a specific infectious disease having a characteristic infective organism, and which

gives rise to the objective skin phenomena known as herpes zoster. In addition to this, however, a great variety of irritative influences of the most varied kind give rise to a precisely similar eruption through their action upon the nerves, whatever this action may be.

For the present, however, and until further research enables us to distinguish between the different affections now grouped under herpes zoster, it seems to me advisable to retain this name for all the affections usually reckoned under this head.



FIG. 32.—HERPES ZOSTER SACRO-ISCHIADICUS.
(a) Genitalis in female.

One of the most intangible forms of herpes zoster is that produced by nervous shock. Roche has reported in the *Lancet* the following illustrative cases: 1. A woman suddenly received the news that her husband had been ordered to India, and the next morning the eruption appeared on her left side. 2. An old man learned that a firm in which he was interested failed, and that evening he noticed the spots on his left side. 3. A woman was much distressed at the sudden illness of her son, and on the following morning the eruption was found to have appeared. 4. A child, six years old, of remarkably equable temperament, was sent to bed

for disobedience. She cried very much, and the next morning the eruption was noticed on her left side. 5. Roche was consulted by a woman whose only son was shortly to be married. She complained of pains in her left side and of an eruption, which turned out to be that of zoster. She herself ascribed the rash to grief at the idea of parting with her son.

Various bacteria have been found in the lesions of herpes zoster by Hartzell, of Philadelphia, and others. Opinions differ, however, as to their exact significance.

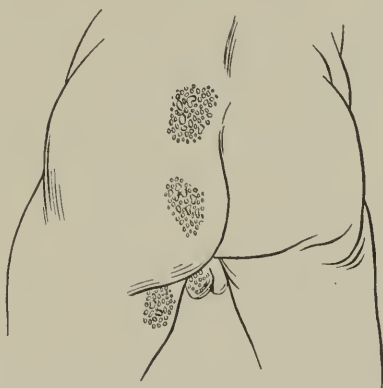


FIG. 33.—HERPES ZOSTER SACRO-ISCHIADICUS.
(a) Genitalis in male.

The occurrence of herpes zoster as the result of the ingestion of arsenic was asserted by Jonathan Hutchinson a long time ago, but the fact was denied. So many cases have been reported, however, within the last few years, that it seems likely such a result may take place in persons of some peculiar idiosyncrasy toward this drug.

The diagnosis of well-developed typical herpes zoster presents no difficulty. The neuralgic pain, the appearance of the vesicles in distinct groups, upon a highly inflammatory base, and the tendency to preserve their form intact,

are characteristic. In eczema, which it most resembles, the lesions tend to exude moisture, dry up, and crust, while in herpes zoster there is no discharge. Eczema itches, H. zoster burns. From simple herpes, H. zoster is distinguished by the presence of pain, by its non-recurrence, its unilateral character, and by its rare occurrence upon the



FIG. 34.—HERPES ZOSTER LUMBO-FEMORALIS.

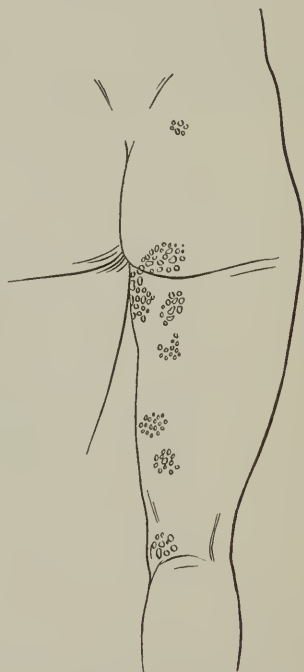


FIG. 35.—HERPES ZOSTER LUMBO-FEMORALIS.

favorite seats of H. simplex, the lips, alæ of the nose, and genitalia.

The treatment of herpes zoster is largely palliative. The disease runs a naturally favorable course, tending to recovery, and the symptoms of neuralgia and burning in the seat of eruption alone require treatment. For the

neuralgia, phosphide of zinc, in doses of one-third of a grain, may be given at the commencement of an attack, and repeated every three hours. It may be combined with one-sixth of a grain of extract of *nux vomica*. If this fails, in severe neuralgic cases, morphia may be given at night. Of late antipyrine has been employed with marked success. Electricity, in the form of the constant galvanic current,



FIG. 36.



FIG. 37.

often gives relief. Five to ten cells may be used, the sponge electrodes being placed along the course of the nerves, and directly to the seat of the eruption. The application should be made once, or, if possible, twice a day, for fifteen minutes at a sitting. This application also relieves the after pains of herpes zoster, when these supervene on the eruptive stage. Among local applications, powders are only available when, by any chance, the vesicles have become ruptured. In

other cases, lotions, ointments, or pigments, are more convenient. The following is a convenient powder:—

R. Pulv. amyli,
 Pulv. zinci oxidi, aa ℥^{ss}
 Pulv. morphinæ sulphat, gr. ij. M.

It is a good plan to sew a soft flannel bandage around the affected part, if the locality will admit, after the application of this powder, to be removed only when required. This will prevent the rubbing of the clothing, which is very irritating. Among lotions, lead water, lead water and laudanum, fluid extract of grindelia robusta, half an ounce to the pint of water, or the following zinc lotion:—

R. Zinci carbonat. præcip.,
 Pulv. zinci oxidi,
 Pulv. amyli,
 Glycerinæ, aa ℥^{iv}
 Aquæ, Oss. M.

Ointments containing fifteen to twenty grains of extract of opium or extract of belladonna to the ounce, may be applied, spread upon cloths, or rubbed in with the finger, when the eruption occurs on the scalp. Among pigments, the essential oil of peppermint, painted over the course of the affected nerve, and over the vesicles, if unbroken, is said to be a very good application.

The prognosis of herpes zoster is almost always favorable, the eruption running its course in a few weeks, in almost all cases, excepting in the aged, when the neuralgia is apt to persist. H. zoster of the orbital region, however, sometimes endangers the eye, and may be followed by deep scars over the scalp with neuralgia and anomalous sensations in the skin. Now and then, however, herpes zoster is a symptom of some form of "blood poisoning," septicæmia, etc., and is of grave import.

Hirsuties.—(See *Hypertrichosis*.)

Hives.—A popular name for various diseases of the skin and other parts. In this country, eighty years ago,

"Hives" was understood to mean what is now commonly called croup. Hence the name of the popular compound syrup of squills, "Coxe's Hive Syrup." In England, the term hives is applied to various skin diseases, chiefly, however, to chicken-pox or varicella. In this country, at the present time, a patient who is said to "have the hives" will almost invariably be found to suffer from urticaria. (See *Urticaria*.)

Hordeolum, or sty, is a small boil, seated at the edge of the eyelids, and involving a Meibomian gland. It is not an active kind of a boil, but progresses sluggishly, the pustule centre being small. It is painful, and some time elapses before all traces of its existence are gone. There may be one, two, or more, on one or both eyelids. The general treatment is that of a boil. (See *Furuncle*.) I have obtained the best results from the administration of calcium sulphide in doses of $\frac{1}{10}$ grain every hour, until ten have been taken; to be repeated daily. Externally, an ointment of ten grains of red oxide of mercury to the ounce will be found useful in stimulating the lids to a healthy condition.

Horn, Cutaneous.—(See *Cornu cutaneum*.)

Hydroa.—(See *Erythema iris* and *Dermatitis herpetiformis*.)

Hyperidrosis.—Excessive sweating. The condition may arise in health from heat, muscular exercise, the ingestion of hot drinks, etc., and in fevers, phthisis, and certain affections of the peripheral, central, and sympathetic nervous systems as a symptom of more or less importance.

Hyperidrosis may, moreover, occur as a substantive affection, and looking at it from this point of view, it may be described as a functional disorder of the sweat glands consisting in an increased flow of sweat.

It may vary greatly in degree, from an amount scarcely

in excess of health to an almost profuse transudation. The local form of the disease, which is by far the most common, may occur upon almost any portion of the body, but is more commonly encountered about the palms, soles, axillæ, and genitals. It may or may not be symmetrical, and is sometimes constant, while at other times it is intermittent or paroxysmal. Yandell reports a case in which the flow occurred daily at the same hour. Numerous cases of unilateral sweating are on record.

Hyperidrosis upon the palms and soles is sometimes excessive. From the palms it may be so profuse that the fluid will accumulate in the hollow of the hand until it runs over the edge. Upon wiping off the secretion in these severe cases the skin is observed whitish, damp, and sodden. The flow appears to come from the whole surface. The soles show the disease to a still more marked degree at times, the soaked epidermis becoming macerated and peeling off, and leaving the tender skin exposed. The pain on walking is often so severe as to keep the patient off his feet. Hyperidrosis of the sole is almost always accompanied by decomposition of the sweat, which gives rise to a peculiar penetrating odor (see *Bromidrosis*).

Lesser* says that there is some connection between the condition known as flat-footedness and hyperidrosis. Trendelenburg thinks that the connection is through the nerves; either there is some reflex action or there is a mechanical pressure upon the plantar nerve. Permanent flat-foot, Lücke thinks, occurs in persons of a "venous habit," that condition which coincides with weak muscles, cold feet, and excessive perspiration. With muscular weakness the formation of varices may occur; not necessarily of the superficial veins, but of the deeper veins, with

* *Deutsche Med. Wochens.*, Nov. 2, 1893.

perhaps thromboses. In 189 cases of hyperidrosis pedum, of which 98 were males and 91 females, Lesser found 51 per cent. of the men and 27.4 per cent. of the women were flat-footed. Varicose veins were found in 40.8 per cent. of the males and 39.5 per cent. of the females.

According to Lesser, hyperidrosis of the feet is often hereditary. I have never had this fact called to my attention, though I can recall one or two cases in which hyperidrosis of the axillæ and hands have appeared to be so.

Lesser also says that increase in the hairy growth upon the limbs is usually accompanied by increased sweat secretion.

The causes of hyperidrosis, other than those mentioned above, are not known. It affects the cleanly and the dirty, the sickly and the healthy alike, and is met with in persons of all ages and both sexes. In addition to diseases of the nervous system, debility, malaria, and occasionally functional or organic disease of the internal organs, as the heart and lungs, may give rise to hyperidrosis. The affection is aggravated by high temperature, and is usually, though not always, worse in summer than in winter. Excitement of any kind, physical or mental, increases the flow of sweat.

The treatment of hyperidrosis must vary with the individual case. When the cause is proximately or exactly known, internal remedies appropriate to the general condition may be employed with good effect. If there be debility, a general tonic treatment is indicated. Iron, quinia, strychnia, and the mineral acids, especially aromatic sulphuric acid, in ten or twenty-drop doses, twice or thrice daily, may be used with advantage. Atropia is the most efficient remedy, and may be used at first to gain time for the further investigation of a case, or to introduce other treatment; its effect is apt to be temporary, however. It may be given by the stomach in doses of $\frac{1}{200}$ to $\frac{1}{50}$ grain, dissolved in water, three times a day, until the physiologi-

Salt baths are sometimes found serviceable. Tincture of belladonna, diluted or in full strength, may be employed, its constitutional effects being guarded against. Weak solutions of chloral, permanganate of potassium, and salicylic acid have been employed with success. In hyperidrosis of the palms and soles, washing with carbolic acid or juniper tar soap may be followed by the application of the following ointment, spread upon cloths, and kept in place with a bandage :—

R. Ung. picis, U. S. P.,
Ung. sulphuris, U. S. P, . . . aa . . . ʒ ss. M.

In obstinate and severe cases, especially when the soles of the feet are affected, Hebra's treatment is the best. It is as follows: The parts having been cleansed with soap and water, the following ointment is applied :—

R. Emplast. diachyli,
Olei olivæ, āā ʒ iv. M.

The plaster is to be melted, and the oil added and stirred until a homogeneous mass results.

Pieces of muslin or cotton cloth are to be cut to the size of the parts, and the ointment spread on thickly and applied. Lint, smeared with the ointment, is also to be placed between the toes (or fingers) so that every portion of the skin may be completely covered with a layer of the ointment. The dressings are to be bound down closely by means of a bandage. The cloths are to be changed twice in the twenty-four hours, when the parts are *not* to be washed, but simply rubbed dry with lint and a starch-dusting powder, after which new dressings are to be applied in exactly the same manner. This treatment is to be continued from one to several weeks, according to the severity of the case. Even when the disease is on the soles, the patient may be permitted to walk about in loose shoes. At the expiration of eight or ten days the parts are to be rubbed with the dusting powder and the dressings discontinued.

The powder should be used for several weeks longer. Usually the sweating tends to lessen and gradually disappear after two or three weeks from the beginning of the treatment. A repetition of the course in severe cases is sometimes necessary before attaining a complete cure. I have sometimes obtained a good result with a 5 per cent. solution of chromic acid.

Of course, the patient must give up his occupation while undergoing this treatment—a sacrifice of time which is impossible in many cases. When, however, circumstances will permit, the treatment just described will succeed when milder measures, however faithfully applied, have failed.

The prognosis of hyperidrosis depends somewhat upon the state of the patient's health, the duration and locality of the disease, and its extent. Many cases are easily cured, while others are extremely intractable. The ability of the patient to follow the treatment must also be considered, as careful attention to the directions given is almost essential to a cure.

Hyperæsthesia of the Skin.—Simple, augmented natural sensibility may be either general or local, diffused or circumscribed, unilateral or symmetrical. The temperature, as a rule, remains normal. The causes are varied, the condition being due either to some functional derangement of the nervous system, or to some organic disease connected with the nerve centres or trunks. Hysteria and allied states are well-known causes; also diseases of the brain, spinal cord, and nerves. The sensation in the parts is unduly exalted, the patient experiencing discomfort from contact with the air, clothes, and other objects. The skin is often exquisitely sensitive to all impressions. In duration it may be permanent or temporary, according to the cause which has occasioned it (Duhring).

The treatment of hyperæsthesia and of its allied condition, dermatalgia, or pain in the skin, will depend upon

whether it be idiopathic or symptomatic. Of course, the general tone of the system must be examined into with great care, and any aberration from the standard of health corrected, if possible. The idiopathic form gets well spontaneously, in many cases, after a few weeks. Local applications, however, may be demanded for acute symptoms. Blisters to the part, the galvanic current, and applications containing tincture of belladonna, of aconite root, or of iodine, and also the essential oils, as Japanese mint, oil of cloves, etc., may be used. Applications of very hot water are temporarily useful, also vapor baths, in general cutaneous pain. (See *Dermatalgia*.)

Hypertrichosis.—(See also *Diseases of the Hair*.)

Hypertrichosis, or Hirsuties, is a condition of abnormal hair growth, whether occurring in localities where no marked appearance of hair is usual, or consisting simply of an extreme development of hair in localities where this is usually found.

Anatomy of the Hair.—Descriptions of the anatomy of the hair are to be found in all works on anatomy, and therefore I shall not go into this subject except very superficially. It will be remembered that the papilla of the hair consists of minute blood-vessels proceeding from the derma, and which send branchlets as far as into the substance of the walls or follicles and beyond the vitreous membrane. Although there is considerable uncertainty with regard to the distribution and mode of termination of the nerves in hair follicles, the existence of nervous elements in the medulla of the hair is indisputable. The hair follicle is therefore in direct communication with the nerves and vascular system.

The hair grows by a process of *vis a tergo*. At the level of the bulb there is constantly a kariokynetic proliferation. New cells unceasingly insert themselves and push forward, pressing the old ones before them, and thus causing the

elongation and growth of the hair; the most external cells of the papilla, that is to say, those of the internal root sheath, in proliferating become squamous, flattened out, and horny, forming the cuticle of the hair. The cells of the middle portion of the papilla belong especially to the external root sheath and in proliferating take on a lamellary form, consisting of the cortical substance, while the cells of the central portion of the papilla preserve their polyhedric shape and form the medulla. Poumayrac seems to think that the cutting of the hair augments the elimination of nitrogen and stimulates the appetite. If this is the case, says Air-long ("Poils et ongles," *These d'agregation*, Paris, 1880), we must admit that cutting an abundant head of hair or shaving a heavy beard should lower the temperature, increase organic combustion, improve the appetite, and favor the return of strength and embonpoint, if the quantity of food taken is at the same time increased. On the other hand, the preservation of a heavy head of hair in slowing the growth of each hair in particular diminishes the elimination which occurs by this route, causes retention in the economy of mineral matters, of fats, and of nitrogenous materials which would otherwise find their exit from the economy by this way. These remarks I cannot entirely endorse, but the almost universal teaching of dermatologists to-day follows so blindly the opinions of Hebra and of the German school, which denies any possible advantage to be gained by cutting the hair, that I have thought it proper to show that certain influences are supposed to be exerted by this procedure, and that the popular and universally diffused opinion that cutting the hair increases the rapidity of its growth may also have some foundation in fact.

The hair also is an organ of protection highly important in animals, but, of course, much less so in man. However, the eyelash protects the eyes against the dust; the

eyebrows against perspiration running down the forehead; the vibrissæ prevent the entrance of irritating dust, etc., into the nose and respiratory organs and the ear, and it cannot be denied that a well-developed beard or head of hair preserve the surface from chill and diminish the loss of heat.

It can easily be understood that modification in vascularization, or innervation of the follicle, produce modification in the growth of the hair. The hair is said to grow more rapidly during the summer than during the winter; the external heat, in fact, draws the blood to the surface, exercises a dilating effect upon the capillaries, brings nutritious material in larger quantity to the root of the hair; naturally, also, the hair grows more rapidly in daytime than at night. The fact that the hair grows more rapidly when it is frequently cut short may be explained in the following manner: The longer the hair is the more difficult it is for the newly formed cells to thrust themselves in among the others, because they have to push before them an increasingly heavy mass of formed cells in proportion to the length of the hair. If the hair, however, is cut, proliferation can take place readily, and consequently the hair grows more rapidly. The more immediate contact of the surface with the air and light should also aid such growth. This explanation Poumayrac seems to think very reasonable, and says it is not only light and heat which influence the growth of the hair; cutaneous, mechanical, or chemical irritation may also act upon the vasomotor system and determine the hyper-nutrition of the hair follicle just as pathological cutaneous irritation may bring about the same result; finally, nervous changes may bring with them the same consequences by their reaction on the vasomotor of the trophic nerves; in the same manner certain general diseases, in modifying vascularization, the condition of the blood or that of the trophic nerves, may modify nutrition and growth of the hairs.

The first hairs appear in the fifth month of intra-uterine life; these are called lanugo; they grow to a length of a quarter to a half an inch, and they fall toward the end of foetal life, to be replaced by the permanent hairs, which originate by a large growth over the external root sheaths of the old follicles, the latter at the same time becoming atrophied. The process, it will be seen, is the same as that which takes place with the teeth. The small hairs which replace the lanugo persist during life except at certain points, as the pubes, axilla in both sexes, the upper lip, chin, and cheeks in man, where, at the epoch of puberty, they are replaced by more vigorous and longer hairs.

When a hair is pulled out, the external root sheath is not removed and a considerable part, even of the inner root sheath, remains in the follicle. The formation of the new hair begins between the forty-first and the seventy-second day after depilation, and takes place from the epithelial cells which have been retained in the follicle. (Giovanni, *Gior. Ital. della Mal Ven e della Pelle*, 1891, No. 1.)

Hypertrichosis.—Several different classifications of the various forms of hypertrichosis have been proposed. Among others that of Ecker ("Ueber abnorme Behaarung des Menschen," Braunschweig, 1878), who has divided the hypertrichoses into generalized, circumscribed, and pathological. The classification which I employed in my last edition was that of Michaelson, who arranged this affection into two classes, one depending on heredity or upon some influence exerted during intra-uterine life, or hereditary hypertrichosis; the other, hypertrichosis occurring in extra-uterine life, or acquired hypertrichosis. I think, however, that the classification, or, rather, arrangement, suggested by Poumayrac ("Les Hypertrichoses," *These de Paris*, 1893) is more practical and satisfactory. Poumayrac divides the abnormal growths of the hair into generalized and circumscribed hypertrichoses. Of these the circumscribed forms are

by far the most common. They are divided into three groups :—

1st. Hypertrichoses unconnected with detrimental pathological conditions and common to both sexes.

2d. Hypertrichoses peculiar to the female sex more particularly.

3d. Hypertrichoses occurring in connection with various well-defined pathological conditions.

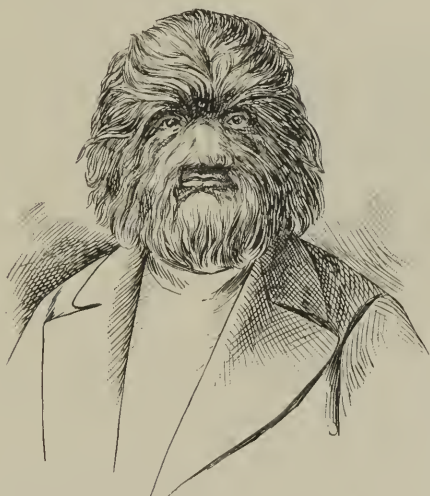


FIG. 38.—HYPERTRICHOSIS (THE RUSSIAN DOG-FACED MAN). (After Ecker.)

Generalized Hypertrichoses include the cases of those individuals whose cutaneous surface is entirely covered with a very abundant hairy growth, often soft and curly, forming a sort of fleece sometimes, but more rarely coarse and stiff.*

* The thick coating of hair with which the fetus is covered during the fifth and six months of intra-uterine life is constantly arranged in certain lines and whorls. This arrangement is the same in the form of hypertrichosis under consideration. Moreover, the hair is fine and silky, resembling lanugo rather than fully developed hairs. For these reasons it has been supposed that hypertrichosis universalis is a condition of arrest of development, with persistence and further development of the embryonal hairy covering.

The deformity is most marked upon the face, probably because this part is uncovered and not subjected to the rubbing of clothing. Such a case is that of Adrian Jejtijew, sometimes called the "Dog-Faced Man." (See Virchow, *Berlin. klin. Wochens.*, 1873, No. 29. Jackson, *N. Y. Medical Journal*, 1885, Vol. xxvii, page 568.) In the case of this individual, as also in that of his son, there was an excessive development of the hairy system, especially upon the face and neighboring parts. The entire



FIG. 39.—HYPERTRICHOSIS UNIVERSALIS (JULIA PASTRANA). (After Ecker.)

face except the ears and nose was covered with a long, soft hair, while from the orifices of the ears and nostrils tufts of long hairs projected. All the rest of the body was covered with hair, although this was finer and softer than that upon the face. It attained the length of an inch and a third to an inch and two-thirds. The brother and sister of the elder individual presented no anomalous growth of hair. The

child by a former marriage, however, who died young, was said to have presented the same characteristics. Similar cases to this have been reported by writers upon the hair and its diseases. Reference may especially be made to the book of Ecker, quoted above, and also to that of Jackson ("Diseases of the Hair and Scalp," New York, 1887), Leonard ("Diseases of the Hair," Detroit, 1880), and the text-books in general. Another case similar to that of the Russian "Dog-Faced Man," was that of Julia Pastrana,

whose portrait is given here. It is a peculiar fact that in almost all of these cases of generalized hypertrichosis there is a defect in the development of the teeth. These points are of great anthropological interest, but are not of sufficient practical importance for our present purpose to be enlarged upon here.

Circumscribed Hypertrichoses.—The first subdivision of this form of hypertrichosis is that in which there is no alteration in the general health, or the pathological nature is evident as a cause. Among these are those cases of excessive growth of the hair of the head or of the beard. This can scarcely be called a disease, or even a deformity, as it is usually a matter of considerable pride. Many cases of women possessing extreme length of hair are on record, which will be found in all the popular and in some of the scientific works on this subject (see Poumayrac). The longest hair of which I have any knowledge belonged to a lady living in the United States. I had the opportunity of examining one hair from her head, which was of a light golden-red color, extremely fine and soft, and was said to be very abundant. This hair, which I measured myself, was found to be of the extraordinary length of seventy-six inches. It is a singular thing that American women appear to possess heavier heads of hair than those of most other nations. I think, however, that it is only in exceptional cases. These enormous heads of hair are not only observed among women, but also among men, much more rarely, however. Rayet ("Traite des maladies de la peau") reports the case of a man of athletic constitution whose head of hair was forty-one and a half inches in circumference, the individual hairs being seventeen and one-half inches long.

At other times it is the beard which takes on the enormous growth. A well-known picture in some town in Europe represents a certain Burgomaster who was killed in attempt-

ing to mount his horse, by stepping upon his beard. Leonard gives the picture of a similar long beard, occurring in an American, which is here reproduced. According to Kaposi, the exaggerated development of hair of the scalp often co-exists with an excessive flow of sebaceous material from the glands, and this hyper-steatosis finally ends in acute or sub-

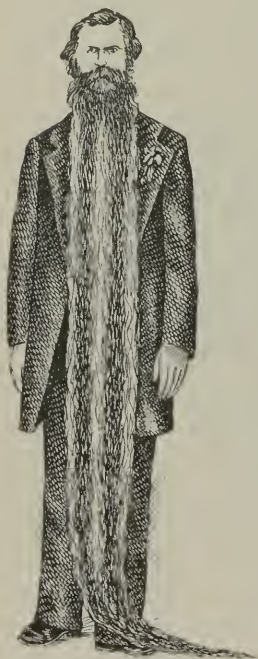


FIG. 40. —HYPERTRICHOSIS.
(Leonard.)

acute alopecia, so that the magnificent heads of hair sometimes observed in young persons, and particularly in young girls, are predestined to a premature fall, and this is followed by a painful paucity. It is possible that a thick head of hair is a predisposing cause of disease, and such disease may possibly stimulate the growth of hair, inclining to excessive karyokynetic proliferation of the cells of the bulb. On the other hand, in certain parts of Spain and even in France magnificent heads of hair are often found on some women whose scalps are perfectly healthy.

Occasionally the vibrissæ situated at the entrance of the nasal and external aural cavities acquire unusual length, more rarely the eyebrows becoming immensely developed. Occasionally in the space

between the two brows a large tuft of hair appears, which may be so long as to interfere with vision. Very often the hair of the sternal region grows to an exaggerated degree. This is more apt to be the case with working men who labor with their chests exposed to the sun and air. I have observed the case of a man of fine phy-

sique and abundant growth of hair in the usual localities, in whom the hair of the trunk has grown to such an exaggerated degree that it covered the entire body from the neck to the groins and buttocks, causing the individual to present the appearance, at a little distance, of a person wearing a sleeveless undershirt of bear skin, the hair being an inch to an inch and a half long, somewhat curly, like that of the pubis, coarse and black. The hair in front was continuous with an abundant growth of hair about the genitals. The man, being totally blind and unable to care for himself perfectly, had contracted pediculosis pubis, which had spread to the entire body, involving those parts of the skin usually supposed to be the habitat of the body or clothes louse; the hair being of the same quality and character as that occurring upon the pubis, the crab louse had found an appropriate habitat and had spread over the entire trunk. At other times it is the hair of the back and shoulders which grows to an exaggerated degree. This form of hypertrichosis is not infrequent in the South of France; occasionally it is the hair of the pubic region, the armpits, the sacral or lumbar regions, which becomes overgrown, without any obvious cause.

Lumbar Hypertrichosis is comparatively common. There is a certain variety of lumbar growth of hair, congenital in origin, which is worthy of special mention because it occurs in connection with a particular malformation of the vertebral column and arrest of development of the vertebræ which is masked by the integument, and which Virchow calls "*Spina bifida occulta*." Gross (Sajous' Annual, 1894) has reported a case of a tuft of hair on the lumbo-sacral region, hanging down over the nates, in an idiot with concealed spina bifida. Brunner* has also reported four similar cases. Two views of the condition prevail. Vir-

* Virchow's Archiv, Bd. 107 and 129.

chow says that spina bifida occulta is the result of an inflammatory process occurring before the completion of bone-formation. The same local irritation causes an overgrowth of the natural elements of the skin. Recklinghausen, on the other hand, believes the abnormal growth of hair to be of the same hyperplastic character as tumors. One case examined post-mortem showed the spinal cord clasped in a myo-fibro-lipoma at the point of opening.

These explanations are, I think, of the kind which do not explain. However, it seems to be the best we know at present of the cause of this variety of hypertrichosis.

Now and then perforating ulcer of the foot is also co-existent with this form of hypertrichosis.

Circumscribed Hypertrichosis Occurring Particularly in the Female Sex.—Many females experience an extra growth during youth or adult age, which in certain cases may assume excessive proportions; usually the upper lip is the part most markedly affected, but the overgrowth may also occur on the chin and cheeks, forming a genuine beard, sometimes of very considerable proportion, as in the case reported by Duhring, of which a picture is here appended.* (*Archives of Dermatology*, April, 1877.)

* The woman, who was married and twenty-three years old, said that the hair had begun to grow in childhood, and had gradually increased year by year, growing more vigorously as the period of puberty approached. The hair of the scalp, at the age of twelve, was quite long, extending to the hips, and by no means thick. Menstruation began at the age of fourteen and has been normal. The establishment of menstruation did not seem to increase particularly the overgrowth of hair in the beard. Hair first manifested itself now in the axilla, on the pubes, and on certain regions of the trunk and the extremities. The increase in the growth of the beard continued until the age of eighteen, since which time it has been stationary. She was married at the age of seventeen and a half, and had had two children, living to the age of two and four years, respectively, without showing any signs of overgrowth of hair. The hair of the scalp having fallen out during fever, was cut, and at the time of examination was rather scanty. The hairs of the mustache were about one-half inch long, of fine texture; those of the beard were about five inches in

It has been asserted that this form of hypertrichosis occurring in women is closely related to disturbances of the



FIG. 41.—HYPERTRICHOSIS (BEARDED WOMAN)

genital function, and also that it is not infrequently connected with strong sexual inclination. With regard to the

length, curly, thickly set, and of fine quality, dark brown in color. There was a diffused hairy patch, about the width of the hand, extending across from shoulder to shoulder on the back. There was a perceptibly excessive growth of hair down the whole back, rather sparse, starting from either side of the spinal column, and taking a course downward and forward around the sides of the thorax, covering the latter portions of the trunk. The vertebral column itself was almost entirely destitute of hair. The hair upon the axilla was no more profuse than normal, and Dr. Duhring was assured that the pubic hair was no more abundant than in most hirsute women. The limbs, with the exception of the forearm, were not remarkably hairy; the latter showed considerable growth of hair, but not very excessive. The point of very considerable importance, in my opinion, in this case of Dr. Duhring's was the existence upon the arms, thighs, and legs of *keratosis pilaris*—a condition characterized by thickness and roughness of the skin, and obstructing the opening of the hair follicles with light-colored masses of dried epithelium. •

latter point, I am convinced there is rarely any relation whatever between the two conditions. I am inclined to think, however, that the excessive growth of hair, or the appearance of hairs upon the chin and other parts of the face in mature or middle-aged unmarried females is the result of a want of exercise of the normal genital functions. No one who has observed the effect of a regular sexual existence upon the healthy female, in improving other operations of the economy, can doubt that when these important functions are allowed to remain in abeyance a certain impairment of the general health may at times occur. I am referring here to the effect of sexual intercourse, and not that of fecundation and child-bearing, and the result of my experience is that the majority of cases which I have been describing occur in women who are not only not consciously subject to strong sexual feeling, but in many cases, as far as can be ascertained, are perhaps more than is usual, even in the case of women, devoid of those feelings. There is no question that in some cases there is a relationship between uterine and ovarian disturbances and excessive growth of hair on the face of females, but an examination of a large number of cases has brought me to the conclusion that the two conditions are by no means frequently dependent upon one another. In fact, I do not think that we can accurately state what the causes of this form of hypertrichosis are, although there is no question that the nerves have more or less direct influence, especially the trigeminal or fifth pair. It will be observed in most cases of overgrowth of hair upon the female face and chin, that the largest hairs appear at and about the points on either side of the chin at which the sub-maxillary branch of the fifth pair emerges from the bone.

Hypertrichosis may occur at four different epochs in the life of women. It may exist at birth; it may appear between fourteen and sixteen years, about the period of

puberty, or when the beard appears in men; it may occur in adult life, or it may not appear until the menopause.

Hypertrichoses of the first two varieties are usually most abundant; to these two classes belong those well-developed beards of a decidedly masculine character which are most usually the object of public curiosity (see Duhring's case above). Occasionally these hairy overgrowths co-exist with certain characteristics of masculinity, at least that is the statement of some authors, but my own experience has been precisely the opposite. I think there is really an exaggerated femininity in some of these cases.

The third variety of hypertrichosis in women, that which occurs in the adult, is generally less profuse than in the first two varieties. Occasionally, however, cases have been reported in which adult women have developed full beards. It is said that this form of hypertrichosis frequently co-exists with disturbances of menstruation (amenorrhea or dysmenorrhea). I must say, for my own part, that I can hardly think that such disturbances of the ovarian and uterine functions are necessary accompaniments to this form of hypertrichosis, but I have said all that I think necessary on this subject above. Occasionally pregnancy, which causes cessation of the menses and also marked modifications in the entire organism brings with it an excessive growth of hair. Slocum (*N. Y. Medical Record*, July 10, 1875) reports a case of this kind.

Hypertrichosis occurring at the epoch of the menopause is extremely common. I should even say that the majority of women present a slight hypertrichosis at this period. It seems part of the reversion from the sexual differentiation to the normal human type of indifferent sex. This form of hypertrichosis is of anthropological interest, but excepting when well-marked the dermatologist is not often called upon to treat it as a pathological condition. I think that this form of hypertrichosis is not due directly to any change

in the sexual or reproductive organs themselves, but is the effect of the peculiar nervous changes which accompany in the majority of cases this period of life in women. Brocq says that when excessive hypertrichosis occurs in such cases women are apt to become nervous, impressionable,

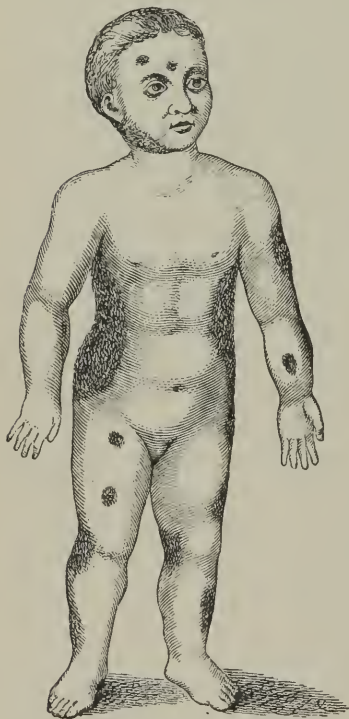


FIG. 42.

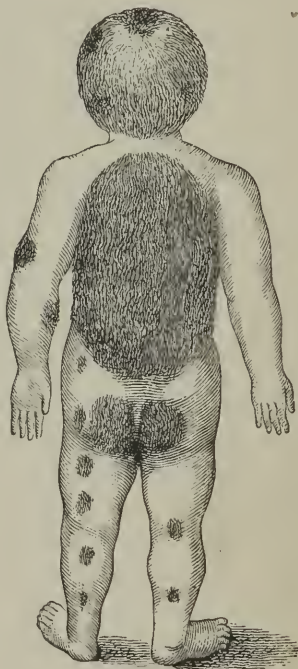


FIG. 43.

HYPERTRICHOSIS LOCALIS. (After Ecker.)

melancholy ; sometimes the woman at this period becomes morbidly afraid of venturing out-of-doors ; she imagines that every one is watching her and examining the extraordinary growth of hair ; she even thinks that she is followed in the street at times ; and the woman who is under this

form of hallucination or morbid sensitiveness becomes a torment to herself and a misery to those around her. The mustache and beard, as it is called, becomes in these women what the French call an *idee fixe*, which may lead to insanity.

Pathological Hypertrichosis.—The hypertrichoses which form this group are distinguished from all other forms by the fact that they occur as the result of a detrimental lesion. The seat of the original lesion as well as its nature may vary greatly; sometimes it is a cutaneous irritation provoked by some local irritative application; at other times the cause is a nervous lesion usually of traumatic character. Hebra describes a case in which the employment of mercurial ointment brought out a growth of hair, and numerous similar cases have been reported by various authors, and, in fact, such growths may be observed by any practitioner of large experience. It is not unusual to meet with individuals of either sex who have small bunches of hair growing from a flat pigmentary spot or from a pigmentary mole or wart. These are the pigmentary nævi of which illustrations are given here and which may occur on almost any part of the body, and which are described in most works on diseases of the skin.



FIG. 44.—HYPERTRICHOSIS.
k n represent small hairy moles.

Hairy Growths Produced by other Cutaneous Disorders.—The hypertrichoses of this kind are neither frequent nor well marked, nevertheless they are met with from time to

time. Excessive growths of hair sometimes occur on the surface which has been occupied by the lesions of prurigo. Keloid growths may also favor the growth of hair.*

Hypertrichoses Resulting from Lesions of the Nerves.—Hypertrichoses of this kind most frequently occur after traumatic lesions of the nerves. Pauteau was one of the first † who recognized the fact of neuralgia producing hypertrichosis. Poumayrac quotes one of his cases, that of a young man of 34 who had fallen a distance of twenty feet upon his head and lost consciousness. Some time afterward the side which had been struck became the seat of extremely acute pain, subsequently extending from the parieto-temporal region to the corner of the eye on the same side. The sight was much diminished during the severe attacks of pain. The hair in the injured area was much larger and coarser than elsewhere and stuck straight out, giving rise to considerable inconvenience. Bellingeri (*Archives générales de médecine*, 1835, t. vii) gives the case of a lawyer 26 years of age who had suffered from a blow on the left sub-orbital region from a piece of iron. Six months after cicatrization he was attacked with feelings of weight and discomfort in the region of the cicatrix, the eye could not stand light, vision was confused; if the patient

* Elliott (*New York Medical Record*, January 16, 1866) describes an interesting case of Keratosis sebaceum accompanied by hypertrichosis. The case was that of a male infant of seven months. At the age of six weeks the child was attacked by an eruption of erythematous patches of the size of a pepper-corn to that of a silver dollar scattered over the body. The lesions were decidedly sebaceous in character as well as squamous. Under the influence of treatment the disease disappeared, but each of the reddish patches subsequently showed a considerable growth of hair nearly a third of an inch long. The sebaceous crusts could only be removed temporarily by treatment and constantly returned. Elliott considers that there was some relation between these lesions and the hypertrichosis, and I am inclined myself to think that the two affections were closely connected because of the exaggerated activity of the sebaceous glands, which, as is known, are closely connected with the hair.

† *Œuvres Posthumes*, t. ii, p. 92.

attempted to read, his eyes became filled with tears. This condition lasted for 13 years, sometimes occurring at first monthly, then the pains became more severe, were accompanied by an increase in volume of the temporal and frontal arteries, together with violent throbbing. The acute neuralgic attacks could not be assuaged excepting by local and general venesection. Sometimes this treatment, however, would prevent the attacks during two or three months. During this period of 13 years the patient remarked that the hair of the scalp on the affected side grew more abundantly and with greater rapidity than elsewhere, and also that the character of the hairs became changed over the diseased area, becoming coarse, stiff, rough, and of large size. Bellingeri supposed the case to be one of chronic neuritis of the fifth pair. Hamilton (*Dublin Journal of Medical Sciences*, 1838) reports a case of hypertrichosis occurring after a wound of the musculo-cutaneous nerve. Mitchell and Keen have also reported cases of a similar character occurring after gunshot wounds. In all these cases, which resemble each other very closely in their origin and mode of occurrence, the overgrowth of hair always followed a neuritis. There is a hypernutrition of the elements of the region involved, especially those of the skin, the epidermis, pigmentary granules, sebaceous and sudoriferous glands, and hairs all being involved.

Hypertrichosis caused by Lesions of Central Nervous System.—Spontaneous or traumatic lesions of the cord may sometimes be the cause of hairy overgrowths. Schiefferdecker (*Centralblatt*, May, 1871) describes a case in which chronic myelitis of the cord was followed by an abundant growth of excessive hairs over the limbs. Joffroy (Arloing's Thesis, *l. c.*) observed compression of the nerve roots in spinal pachymeningitis to be accompanied by hypertrophy of the hairy system. Jelly (*British Medical Journal*, 1873) observed the development of hair over the

paralyzed regions in a young man who was probably suffering with pachymeningitis resulting from a fall.

Hypertrichosis Consecutive to Lesions of the Vascular Apparatus.—The occurrence of hypertrichosis in individuals affected with aneurism, and particularly aortic aneurism, is the subject of occasional observation; it has been suggested that the growth in such cases is due to some impediment of the circulation producing a sort of blood stasis.

Hypertrichosis due to More Complex Morbid Conditions.—Exaggerated growth of hair in tuberculous persons has often been noticed. Even when such individuals are in a decided state of malnutrition the overgrowth of hair is not at all uncommonly noted. No satisfactory explanation, I think, has been given this condition, but Poumayrac thinks it possible that it may be the result of vaso-dilatation, or some peculiar action of the disease upon the trophic nerves. The frequency of peripheral neuritis in such cases seems to indicate the possibility of such a mode of causation. Tarnu (*Journal de Médecine de Bordeaux*, Dec. 18, 1882) has reported eight cases in which persons affected by local tuberculosis have shown marked overgrowth of hair as a result of the disease. Bricheteau (*Article "Osteitis," Dict. Encycl. du. sc. Médicales*) reports the case of a young woman, 24 years of age, with a particularly white skin and jet black hair, who, after suffering from miscarriage, fell into a condition of chronic gastro-enteritis followed by complete marasmus, threatening a fatal termination; however, complete recovery took place and, as the patient's nutrition and strength began to augment, the back, loins, chest, and abdomen became the seat of very numerous, minute elevations resembling those of keratosis pilaris, a sort of goose-skin condition. Some days after these minute growths appeared, each one was found to be the base of a small hair. These were very short, of a blonde color, and silky at first, but grew very rapidly and so excessively that the whole body

became covered with hair. A few months afterward all this hair dropped off and never reappeared. Other similar cases are quoted by Poumayrac. Ohmann-Dumesnil (*Journal of Cutaneous and Genito-urinary Diseases*, 1888, page 97) reports a case where a tuft of hair, almost like a horse's tail, grew in the lumbar region, a little distance above the cleft of the nates. This case resembled very closely the cases to which allusion has been made, occurring over the seat of spina-bifida, but the present case was one of acquired hypertrichosis and no spina-bifida was present. It appeared to have resulted from an injury. The patient, who was 30 years of age, had, fourteen years previously, fallen and bruised himself in that locality. The question of maternal impressions as productive of this form of hypertrichosis has never been thoroughly and scientifically investigated. I formerly thought that such impressions could have no causative influence, but I am no longer inclined to deny the possibility that maternal impressions may produce changes of this sort during development, because the belief is almost universally prevalent, and because the older I grow the more inclined I am to give a great deal of weight to popular beliefs.*

Treatment is only called for in these partial cases of hypertrichosis when a cosmetic effect is required.

When, for any reason, depilatories are required, one of the following may be employed:—

R.	Calcis vivæ,	$\bar{3}$ ij- $\bar{3}$ v	
	Pulv. iris Florentin,	$\bar{3}$ iv.	M.

This is moistened with water and spread upon the affected part as a paste.

* See Demangeon (De l'imagination considere dans ses effets directs sur l'homme et sur les animax et de ses effet indirect sur le product de la gestation, 2d edit., Paris, 1829; also Hughes "Etude sur les nævi pigmentaires," Thèse de Paris, 1890).

moles may sometimes be removed by the knife when favorably situated and not too large. Circumscribed or diffuse growths of hair, occurring chiefly about the face and in females, are best removed by electrolysis. In former times epilation, shaving, and the application of caustic depilatories formed the only modes of treatment, and these were highly unsatisfactory, as only in part removing the disfigurement, and at the same time requiring frequent repetition. In fact, epilation by means of forceps is said, and probably with truth, to stimulate the growth of new hair in the neighborhood.

To Michel and to Hardaway, of St. Louis, we are indebted for a safe, easy, and effectual method of removing superfluous hairs by electrolysis. Though electrolysis had been suggested at a somewhat earlier date by Piffard, as a means of destroying the hairs in hairy *nævi*, the method was first employed systematically by Michel in trichiasis, and was adapted to general dermatological use by Hardaway, who read a paper upon the subject before the American Dermatological Association in 1878.

The operation, as described by Hardaway, is performed as follows: A No. 13 cambric needle is attached to any convenient handle, which latter is connected with the negative wire of a galvanic battery; a moistened sponge-electrode is connected with the positive pole. Under a strong lens, held in the left hand (or without this if the operator has very good eyesight), the patient being seated in a reclining chair, facing a good light, the needle is entered, as near as possible, into the hair follicle; after this has been accomplished, and not till then, the patient is told to bring the sponge (positive) electrode in contact with the palm of the hand. The needle is not withdrawn until a slight frothing is observed around the stem, showing that the electrolytic action has been fully developed; but to avoid shock the sponge-electrode is first released by the patient,

the needle being removed subsequently, this order being exactly the reverse of the initial steps.

The hair should always be left *in situ*, and not extracted before the needle is introduced, as it is a guide for the introduction of the latter, the instrument being passed in alongside of it. Besides this, it is an immediate guarantee of the success of the operation; for if the hair comes away with the very gentlest traction of the depilating forceps, a point always to be tested, at once we know that the papilla has been destroyed; but if force is required for its extraction, it is a sign that the follicle has not been properly entered. In this case the needle is reintroduced, or, better, it is not removed at all, repeated attempts being made from time to time to withdraw the hair until finally it is loosened. Eight cells of a freshly-charged galvanic battery will usually suffice. A greater or less number, however, may be required in one case or another. The operation is a painful one, and but few hairs can usually be removed at a sitting.

The needle should be as fine as can be procured, even finer than a No. 13 cambric, if such is procurable. An expert mechanic can grind an ordinary needle down to the finest diameter. Some operators prefer an irido-platinum needle; others a watchmaker's very fine steel wire. It must be remembered that the larger the needle the longer it can be retained *in situ*, and the stronger the battery power the more rapidly and thoroughly can the hairs be removed. But if either of these conditions overstep the proper limits, abscess and scars are apt to follow, and much unnecessary pain is caused.

In any case, thirty or forty per cent. of the hairs remain (or appear to remain, for the growth of neighboring fine hairs seems to be stimulated by the use of the electricity), and the operation must almost always be repeated once, or several times. Some expert operators claim a return of

only five to ten per cent. of hairs operated upon, but for the majority of operators the percentage above stated will be found safer to reckon upon.

When the operation is carefully performed not much scarring results, and most ladies who suffer from the growth of a moustache or beard would prefer the scars.

Hypertrophy of the Hair.—(See *Hair, Diseases of*.)

Hypertrophy of the Nail.—(See *Nail, Diseases of*.)

Hypertrophy of the Skin.—(See *Callositas, Chloasma, Clavus, Cornu cutaneum, Dermatolysis, Elephantiasis, Ichthyosis, Keratosis pilaris, Lentigo, Molluscum epitheliale, Morphæa, Nævus pigmentosus, Scleroderma, Sclerema neonatorum, Verruca*.)

Ichthyosis.—Ichthyosis is a congenital, chronic, hypertrophic disease, usually occupying the whole surface, characterized by dryness, harshness, or scaliness of the skin, and a variable amount of papillary growth. Two varieties are generally described, I. simplex and I. hystrix. I think the latter a distinct affection, and have described it below. I am now understood to speak only of ichthyosis simplex. The disease may be so mild in form as to amount to little more than a certain dryness and roughness of the skin. It may, on the other hand, be quite severe. As ordinarily met with, ichthyosis consists of an altered state of the skin, characterized by a harsh, dry condition of the whole surface, accompanied by the production of scales, sometimes fine and branny, at other times coarser, and shaped after the lines and furrows of the skin. The latter, from their resemblance to fish scales, have given occasion to the name of the disease, "ichthyosis," or the "fish-skin" disease. The amount of scales depends upon the age of the patient, the severity of the disease, and the efficiency of any treatment which may have been employed. The scales, if not removed by frequent bathing, tend to accumulate. They are usually whitish, grayish, or yellowish in color, with

sometimes a glistening look. Occasionally the general color of the eruption is of a more or less yellowish or dark olive green. Even when the disease is not severe, it gives the surface an unwashed look.

The localities in which ichthyosis is developed to the most marked degree are the lower extremities, from the hips to the ankles, and the arms and forearms. The skin of the backs of the hands and the face very often has a peculiar, smooth, drawn, parchment-like appearance, which is very characteristic. Sensible perspiration is, in most cases, absent, excepting in the face, axillæ, palms, and soles. There is sometimes marked hyperidrosis in the two last. The disease is worse in winter than in summer; in fact, it is apt to almost disappear during the latter season. The course of the disease is essentially chronic. Beginning to show itself distinctly during early childhood, it grows more and more marked with each year of the patient's life. It sometimes appears to be hereditary, but no distinct and invariable hereditary influence seems to prevail in all cases. Ichthyotic parents usually beget healthy children. The patient himself generally enjoys fair or good health. The disease occurs in all races, both sexes, and in every grade of society.

The diagnosis of ichthyosis is usually not difficult. The history alone differs from that of all other skin diseases, its chronicity offering a marked contrast to the rapidly developing character of the acute inflammatory disorders.

Internal treatment is ineffectual, or nearly so, in many cases of ichthyosis, so far as the complete cure of the disease is concerned, but much can be done to ameliorate the patient's condition and toward preventing entire atrophy of the cutaneous glands.

Arsenic and cod-liver oil should be administered separately or together. A pill, containing $\frac{1}{30}$ grain of arsenic, three times a day may be given with propriety to adults,

but the dose must be proportioned to the idiosyncrasy of the patient. It should be continued in courses of several months with intervals. Cod-liver oil may be given pure and alone, in the form of emulsion or in capsules. There may be cases in which jaborandi or pilocarpine may be employed for short periods, but this drug is so apt to disagree that I rarely employ it.

As regards the external treatment, this should be active and continuous. The skin is to be kept moist and supple by the frequent administration of warm baths with alkalis or soap. Vapor baths are also useful. Inunctions of some emollient material should always be practiced after the bath. In well-marked and severe cases the soap treatment will be found valuable to remove some of the dry and horny epidermis and prepare the way for the application of emollients. A sufficient quantity of *sapo viridis* is to be rubbed into the skin twice daily for four or six days, during which period the patient is to refrain from bathing. A bath is first to be taken four or five days after the last rubbing, when, in fact, the epidermis has begun to peel off; afterward, inunction with a simple ointment is to be practiced, in order to prevent fissuring of the new skin. For this purpose, oil of sweet almonds, glycerine, pure or diluted, with one to seven parts of water, or one of the following ointments may be used:—

R.	Adipis benzoat.,	℥ iv	
	Ung. petrolii,	℥ j	
	Glycerinæ,	℥ iv.	M.

Sulphur has been very highly extolled as a remedy in ichthyosis. I have not, as yet, had any opportunity to test its merits. It has been employed in the form of ointment in the strength of half a drachm to a drachm to the ounce, and more recently by impregnating the underclothing with sulphur, hanging it in a box, and vaporizing flowers of sulphur on a hot—not too hot—

plate. The clothing should be reimpregnated every five or six days.

The following ointment is recommended by Brocq :—

R.	Acid. salicylici,	℥ ij-iv	
	Sulphur præcipitat.,	℥ ij	
	Glycerinæ,		
	Lanolini, āā	℥ ij.	M.

Another formula recommended by Brocq is this :—

R.	Acid. salicylic.,		
	Acid. tartaric.,		
	Resorcini, āā	℥ j	
	Sulphur. præcipitat.,	℥ ijss	
	Adipis,	℥ j	
	Lanolini,	℥ ij.	M.

These ointments should be well rubbed in every evening and removed with soap in the morning.

Ichthyol ointment may be useful in some cases, as follows :—

R.	Ichthyolis,	℥ ij-iv	
	Acid. salicylici,	℥ j	
	Sulphuris præcip.,	℥ ij	
	Adipis,	℥ iv.	M.

To be applied at night and washed off next morning with ichthyol soap.

The prognosis of ichthyosis is entirely unfavorable as regards permanent cure, but alleviation of the symptoms may be brought about very satisfactorily. The affection should really be regarded as a deformity rather than a disease, though it predisposes strongly to the occurrence of eczema, particularly of the hands.

Ichthyosis Fœtalis.*—Infants affected by this peculiar condition show at birth a thick, hard, resistnat epidermis, without elasticity. The skin is covered with dried sebum; it has a dirty yellow color, is hard, rigid, and deeply fissured

* An excellent article on this subject, by Thibièrege, will be found in the *Dictionnaire Encyclopédique*.

at all points, owing to the effect of the infant's growth during foetal life upon its inextensible integument.

The mouth is widely open; the infant can neither close it, nor can it take the breast. All the lines of the face are obliterated; every movement is made with difficulty. Even if the patient is born alive, it soon succumbs to inanition or to the exhaustion due to the splitting and suppuration of the numerous fissures. The etiology of the affection is not known. I have described it here because it is sometimes mistaken for an effect of maternal impression, as by a burn. The treatment should be by means of frequent baths, antiseptics, and emollients.

Ichthyosis Hystrix is characterized by the formation of irregularly shaped and sized, ill-defined, rough, harsh, yellowish, brownish, or greenish patches, made up of enormously hypertrophied, more or less horny papillæ. Unlike the ordinary form of ichthyosis, this is apt to be localized, and rarely covers the surface to any extent. It is sometimes distributed in the line of the nerves. Sometimes the papillæ are so hypertrophied as to stand out like porcupine quills—hence the name "hystrix."

The treatment of ichthyosis hystrix is essentially that of any warty or horny, non-malignant growth. The patch, if not too large, may be poulticed until softened, and then



FIG. 45.—ICHTHYOSIS FOETALIS.

attacked by caustic potassa or glacial acetic or chromic acid, or it may be removed by the knife. In one case considerable improvement was gained by painting the surface, twice daily, with the following:—

R.	Acidi salicylici,	3 ^{ss}	
	Ext. cannabis ind.,	gr. x	
	Collodii,	3j.	M.

The salicylic rubber plasters made by Johnson & Johnson prove useful in these cases.

Another preparation which has been used with good effect is the fluid extract of *Thuja occidentalis*, painted on in the same way.

Impetigo (*im'-pĕ-tī'-gō*) is an acute inflammatory disease, characterized by the appearance of one or more pea- to finger-nail-sized, discrete, rounded and elevated, firm pustules, unattended, as a rule, by itching. The eruption is occasionally, but not often, attended by slight constitutional symptoms, as loss of appetite, constipation, and malaise. The pustules come out one or two at a time, and are discrete and scattered, never tending to coalesce. They are tense, raised, semi-globular, of a whitish-yellow color, and at first surrounded by an areola, but with little infiltration. In number they may vary from one to a dozen or more. They may occur upon any part of the body, but are common upon the face, hands, feet, toes, and lower extremities; also upon the palms and soles. Commonly they itch or burn little or not at all. The disease may last several weeks, the lesions coming out rapidly, one after another, at first, lasting a day or two in a typical condition, and then becoming darker or bloody, drying, crusting, and becoming absorbed. The fluid contents of the pustules, where these are ruptured by accident or design, are seen to be thinner than would appear from the firm aspect of the unruptured pustule. The crusts may be abundant, and of a yellowish or brownish color, or they may be insignificant, the pustule

being absorbed. In no case does a permanent scar remain. The disease tends to a speedy recovery. Relapses are not common.

Impetigo is to be distinguished from eczema, impetigo contagiosa, and ecthyma. From eczema it is distinguished by the superior size and development of the pustules, their small number and separate arrangement. In addition, the pustules of impetigo do not incline to rupture, and there is rarely a crusted discharge. The opposite in all these respects is found to occur in eczema. In addition, eczema is invariably accompanied by infiltration and by itching, neither of which are present in impetigo. In impetigo contagiosa, which must not be looked upon as a variety of impetigo, but as a distinct disease, the affection begins by a vesicle or vesico-pustule like that of vaccinia; the crust is flat, sometimes umbilicated, without any infiltration about its base; and above all, there is a history of contagion. None of these characters are found in impetigo. Impetigo is often confounded with ecthyma, but in the latter affection the pustules are flat, and are surrounded by an extensive, inflammatory, hard base; in impetigo they are elevated and rounded, and have generally but a slight areola. In ecthyma the crusts are blackish or brownish in color, are large and flat, and are seated on a deep excoriation. Impetigo usually occurs in the strong and healthy; ecthyma in the weakly and cachectic.

DIFFERENTIAL DIAGNOSIS

BETWEEN

IMPETIGO.

1. Pustules large and prominent.
2. Pustules discrete.
3. Pustules not numerous.

PUSTULAR ECZEMA.

1. Pustules small and not greatly elevated.
2. Pustules confluent.
3. Pustules present in large numbers.

IMPETIGO.

4. Pustules do not rupture.
5. Skin but little thickened.
6. Itching moderate.
7. But little, if any, discharge.
8. Speedy recovery.

PUSTULAR ECZEMA.

4. Pustules rupture.
5. Skin infiltrated.
6. Severe pruritus.
7. Secretion abundant.
8. Lesions remain for some time.

IMPETIGO.

1. Pustules elevated and rounded.
2. Base not infiltrated.
3. But slight areola.
4. Scales yellowish and small.
5. Scales separate in a few days.
6. No pigmentation.
7. Slight excoriation.
8. General health good.

ECTHYMA.

1. Lesions flat or oval.
2. Base infiltrated.
3. Marked areola.
4. Scales large, black, and flat.
5. Scales separate in two or three weeks.
6. Some pigmentation.
7. Deep excoriation.
8. General health poor.

IMPETIGO.

1. Not communicable.
2. Begins as pustules.
3. Lesions deep.
4. Pustules elevated and rounded

IMPETIGO CONTAGIOSA.

1. Contagious affection.
2. Begins as vesicles.
3. Lesions superficial.
4. Pustules flat or umbilicated.

The treatment of impetigo is both prophylactic and curative. Being due to the implantation and growth of the *Staphylococcus pyogenes* every effort should be made to prevent the affection spreading and to destroy the parasite. Poultices rendered antiseptic by the addition of boric acid should be employed to remove the crusts, the entire surface of the body should be frequently cleansed with warm water and corrosive sublimate soap, and compresses wet with a saturated solution of boric acid or a solution of bichloride of mercury 1-2000 should be applied to the lesions. If ulcers form beneath the crusts, these should be thoroughly cleansed by means of peroxide of hydrogen and dusted with euophen, dermatol, or aristol, and if an ointment is called

for, one containing one of these substances or a strong boric acid ointment may be employed.

Internal treatment is not required.

Impetigo Contagiosa is an acute, inflammatory, contagious disease, characterized by the formation of one or more superficial, discrete, roundish or ovalish, vesico-pustules or blebs, the size of a split pea or finger nail, which pass into crusts. The eruption is commoner among infants and young children. Isolated, flat, or slightly raised vesicles are first seen, small in size at the beginning, but rapidly spreading on the periphery until they become like little blebs, with a thin, withered-looking, collapsed wall. The lesions are few in number. Usually they are discrete, but sometimes two or more coalesce. They are most commonly found about the mouth, on the chin and nose, and on the hands. Crusts form in a few days, usually yellowish or straw-colored, and, as they dry, loosen at the edges, so as often to look as if they had been stuck on the skin. The surface beneath is moist and excoriated. The mucous membranes of the mouth and conjunctiva are occasionally invaded. The disease may extend from place to place by auto-inoculation. It runs its course in about ten days, tending to a spontaneous recovery. Sometimes, however, it runs an anomalous course.

Impetigo contagiosa rarely occurs among adults; its attacks are almost exclusively confined to children. The disease is contagious and auto-inoculable. It appears sometimes to occur in the form of an epidemic, and is commoner in summer.

Impetigo contagiosa is to be distinguished from eczema pustulosum, from impetigo, and from scabies. As to the first three, see under their respective heads. As to scabies, see the following table :—

DIFFERENTIAL DIAGNOSIS

BETWEEN

IMPETIGO CONTAGIOSA.

1. Non-parasitic disease.
2. Pustules occur alone.
3. Pustules mostly large.
4. Pustules not very numerous.
5. No tendency to group.
6. Eruption lasts for a few days.
7. Little or no itching.
8. No burrows in the skin.
9. Lesions not multiform.
10. Lesions usually preceded by fever.
11. Usually appears first on face.

SCABIES.

1. Presence of parasite.
2. Presence of pustules, papules, and vesicles.
3. Most of the lesions small.
4. Lesions present in large numbers.
5. Lesions usually occur in groups.
6. Disease lasts for weeks and months.
7. Intense itching.
8. Presence of burrows.
9. Multiformity of lesions.
10. No constitutional disturbance.
11. Usually seen first on hands or body.

From varicella, pemphigus, and herpes iris, the appearance and distribution of the lesions will distinguish the affection.

The treatment of impetigo contagiosa is simple. An ointment of ten grains of ammoniated mercury to the ounce is as good a dressing for the lesions as is necessary, and this, with cleanliness, will suffice for a rapid cure.

Impetigo Herpetiformis.—A rare affection of the skin occurring in pregnant females, characterized at first by the appearance of superficial, miliary pustules, the contents at first opaque and later yellowish-green in color. Successive pustules form during the course of the disease, having a marked tendency to form groups. The lesions are surrounded by a red areola, and rest upon an inflamed base. A dirty, brown crust finally forms upon the centre of the fully developed pustule, while a single, double, or even

triple ring of new lesions appear, surrounding the original one, which follow the same course.

The lesions originally appear at isolated points, especially the fold of the groin, the umbilicus, the breasts, and axillæ, but gradually spread and coalesce until large areas become affected. When the crusts become detached and fall off, the underlying skin is found red and covered with fresh epidermis, or moist, weeping, infiltrated, and covered with numerous papules. Sometimes the mucous membranes are involved, there are symptoms of fever and general disturbance, with a fatal result in most cases, either in the course of the first attack, or in a second one occurring during a subsequent pregnancy. Some observers consider the affection as septicæmic in character, others reflex nervous and vascular. I am inclined to think it a form of *Dermatitis herpetiformis* (Duhring's disease), although I have never seen a case. It is extremely rare. Most of the cases observed have occurred in Vienna.

The treatment should be that of *dermatitis herpetiformis* (*q. v.*).

Infantile Syphilis.—(See *Skin Diseases in Hereditary Syphilis*.)

Influenza, Skin Affections in.—Various affections of the skin have been observed in the course of this disease, but apart from the study of their bearing upon the disease process generally, but little practical interest is at present connected with these dermatoses.

Munro (*Jour. Cut. and Ven. Dis.*, July, 1891) describes and pictures a case of hæmorrhagic exanthem. Hight (*Brit. Med. Jour.*, July, 1891) gives a case of gangrene. A case of psoriasis is reported in the *Monatsheft f. Prakt. Dermatol.*, Bd. XI, p. 76, and various other forms of skin disease in the same volume, pp. 34, 76, 140, 189, 199, and 330.

Intertrigo.—(See *Erythema intertrigo*.)

Iodine Eruptions.—(See *Dermatitis medicamentosa*.)

Itch—Army Itch.—(See *Scabies*.)

Itch—Michigan, Prairie, etc.—(See *Pruritus hiemalis*, *Scabies*, *Eczema*, and *Urticaria*.)

Keloid (more properly *Cheloid*).—Keloid is a connective-tissue new growth, characterized by one or more irregularly-shaped, variously-sized, elevated, smooth, firm, somewhat elastic, pale red, cicatriciform lesions.

The disease usually begins as a small, pea-sized nodule, increases slowly in size, and commonly assumes an ovalish, elongated, or crab-claw-shaped form, or may occur in streaks or lines. The lesion varies greatly in shape, and may be quite small or as large as the palm. The outline is well defined, and the surface contour rounded and highest in the centre. Taken between the fingers, it has a firm, dense, slightly elastic feel. Its surface is smooth, shining, and generally devoid of hair, and its color reddish or pinkish. The lesion is usually single, though several may exist simultaneously. It is more common over the sternum, but it is also met with on the mammæ, neck, ears, arms, and elsewhere. It is sometimes painful, especially on pressure, and occasionally, but rarely, it itches. Now and then acute inflammatory symptoms may arise in a keloidal tumor, giving it a malignant appearance. These usually disappear in turn spontaneously. The course of the disease may be rapid or slow; having attained a certain growth it is apt to be stationary, and may remain a lifetime, though in most cases it ultimately disappears spontaneously.

Keloid may originate spontaneously or in cicatrices. The two varieties run into each other. Cicatricial keloid often originates in the most insignificant scars. Bites of leeches, erosions, or pin-scratches are enough in individuals predisposed to the disease. Lehonneur (*Thèse de Paris*, 1856) saw a case where the pressure of a shirt button was sufficient to give rise to keloid. Besnier has seen multiple

keloid follow non-parasitic sycosis, and I have observed the same in several cases. Acne, especially of the variety known as acne indurata, of the back and chest, is often followed by keloid. Psoriasis may be followed by keloid (Purdon). Keloid of the lobe of the ear, following the piercing for ear-rings or the wearing of ear-rings, is not uncommon. Burns by fire, or chemicals, particularly the latter, cuts, flogging, tattooing, and wounds of all kinds are not unfrequently followed by this growth. Keloid is also met with in syphilitic individuals.*

The occurrence of spontaneous keloid, at first admitted, was for some years doubted by many of the first dermatological authorities. At present, however, its existence has been proved beyond a doubt by the observations of De Amicis (*Cong. de Dermatol.*, 1889), Ory (*Bull. de la Soc. Anat.*, 1875), Schwimmer (*Ziemssen's Hand-book*), Bouzon (*Thèse de Paris*, 1893). Most cases reported were of multiple tumors, from a dozen or so in number up to 318 in the case reported by De Amicis.

In the case, both of spontaneous and cicatricial keloid, some constitutional peculiarity seems to be present. Most writers consider heredity to play a part in the production of this growth, but facts in support of this view are wanting, excepting in the cases reported by Hebra (*Skin Diseases*, N. Syd. Soc.). Scrofula has also been invoked, but without much evidence to support the view of its diathetic effect. It is otherwise with syphilis. Bouzon finds that an analysis of 75 reported cases of keloid gave 16 or 20 per cent. when the patients were syphilitic, a great increase in the proportion over Taylor's statistics, but both writers consider syphilis to be a marked predisposing cause. The negro race is peculiarly susceptible to keloid.

* R. W. Taylor (*Jour. Cut. and Ven. Dis.*, 1883, p. 308) says that keloid occurs in one-half of one per cent. in his experience of syphilitic practice.

Under the microscope the lesions of keloid are seen to be made up of a dense, fibrous mass of tissue, whitish in color and composed of compact bundles of connective tissue, having their seat in the corium, and arranged in a meshwork. In the newer lesions fusiform cells and blood-vessels are found in this meshwork and extending beyond the macroscopic limits of the growth. The newer keloid lesions look a little like sarcoma under the microscope; the older ones like fibroma. I am inclined to think the disease infectious, although it would be difficult to give a reason for such belief. A comparison of this article with that on *Acne keloid* will perhaps suggest the basis of my conjecture.

The symptoms of keloid are so striking that no difficulty need be experienced in making a diagnosis. It is most liable to be mistaken for simple cicatrix, from which it may be distinguished by its color, outline, elevation, and consistence, and, frequently, by the presence of pain. *Acne keloid*, however, is very liable to be mistaken for ordinary keloid. A careful study should be made of all cases of keloidal acne occurring on the nape of the neck or about the scalp.

The treatment of keloid is rarely satisfactory. When operated upon by the knife or caustic it is apt to return, and frequently in an aggravated form. Caustic potassa is the best caustic to use, but the growth should be touched with great caution while it is still making progress, or disappointment may be the result. Two forms of treatment have recently been recommended as successful. One of these consists of repeated scarifications, such as are described under lupus vulgaris. These must be persevered in, as at first the keloid surely returns. After a while, however, it is said to disappear. Parasiticide remedies should be applied simultaneously. Hardaway has used multiple puncture with the electrolytic needle with success. (See *Elec-*

tricity in the Treatment of Skin Diseases.) Marie (*Gaz. des Hôpitaux*, Mar. 3, 1893) considering keloid infectious avers scarification, and uses hypodermic injections of creasote dissolved in oil (20 per cent.). The operation is followed by pain for some hours and causes suppuration, which results in destruction of the growth without relapse. Hypodermic injections of morphia are occasionally required to allay the pain. Chloroform and anodyne liniments may also be prescribed for the same purpose, and I have used the fluid extract of hamamelis with benefit. Wilson recommends painting the group with a solution containing one drachm of iodide of potassium, an ounce of soft soap, and an equal quantity of alcohol, followed by the application of lead plaster spread on a piece of soft leather, the dressing being kept on a week and then replaced by another.

The prognosis of keloid is not very favorable. The utmost that can be said in any given case is that it *may* disappear either spontaneously or under the use of supposed remedies after a time. Perhaps scarification and electrolysis may be more successful than the forms of treatment which used to be employed, though their use is too recent to justify any positive assertion. Its course is usually progressive, with occasional temporary arrest of development. Very often, however, the lesions remain stationary for years.

Keloid of Addison.—(See *Morphæa*.)

Keratosis Follicularis.—This affection has been described by J. C. White of Boston (and by Darier and Thiebault under the name of *Vegetating Follicular Psorospermiosis*). See *Psorospermiosis*. The lesions begin in the form of pin-head-sized, firm papules, nearly the color of the surrounding skin. They increase in size and become slightly hyperæmic; later they show a hemispherical or flattened aspect, and become covered by a very adherent brownish or grayish crust in the shape of a minute horn, projecting

out of the depressed centre of the tumor in which it seems inlaid or enchased, and having a grayish-white color and a cylindrical or pointed shape. The depression corresponds to the orifice of a pilo-sebaceous gland.

These lesions are occasionally much enlarged or grouped, forming papillomatous masses of a reddish or brownish color, and covered with greasy or horny masses, which when pressed give exit to a sebaceous or purulent excretion. When fully developed the disease may extend over large portions of the surface of the body, being most distinctly marked and hypertrophied about the genital organs, the folds of the joints, the flanks, the presternal region, scalp, and face. Sometimes the palm of the hand and the nails are affected. The skin exhales a peculiar foetid odor.

The treatment consists in friction with *sapo viridis* or tar soap to cleanse and soften the patches of disease, after which lotions of corrosive sublimate, carbolic acid, or boric acid may be employed.

Ointments of salicylic acid may also be employed to advantage.

Keratosi Pigmentosa.—(See *Verruca senilis*.)

Keratosi Pilaris.—In its mildest form this affection is seen on the backs of the arms and on the thighs in the form of numerous minute, dry, horny growths, of the color of the surrounding skin, looking like goose skin. The hairs growing from these elevations are usually atrophied or curled up in their follicles. In the more marked forms of the disease a well-marked, hard, pin-head-sized papule is observed, which may be of various shades of red or brown. Sometimes the lesions become hypertrophied to the size of acne papules. The color usually disappears more or less upon pressure. In these forms of keratosi pilaris the hair disappears entirely or is broken off short at the surface.

Keratosi pilaris is usually unaccompanied by any sensation, but at times there is considerable pruritus. In the

more marked form various other localities beside those above mentioned may be involved, as the forehead, eyebrows, cheeks, and chin. The disease is essentially a chronic inflammation about the hair follicle, resulting in



FIG. 46.—KERATOSIS PILARIS.

atrophy. Scrofulous persons seem to be more subject to the affection, although in its milder forms it is extremely common.

The treatment is essentially that of ichthyosis.

Lentigo.—Freckles, though a common affection, is so

unimportant as to demand only a passing notice. Their ordinary seat is upon the face, but they may occur in any part of the body. They are rarely seen before the third year, and tend to disappear spontaneously in older persons. Freckles of an intense dark-brownish or blackish color are met with as one of the symptoms in the rare disease known as "xeroderma of Hebra." (See *Angioma pigmentosum et atrophicum*.) The remedies employed in lentigo are the same as those used in chloasma. (See *Chloasma*.)

Lepa.—Lepa, or leprosy, is an endemic, chronic, malignant, constitutional disease, due to the invasion of the bacillus lepræ, characterized by alterations in the cutaneous, nerve, and bone structures, resulting in anæsthesia, ulceration, necrosis, general atrophy, and deformity. It is a constitutional affection and involves the whole organism most profoundly. Its invasion is slow and insidious. Premonitory symptoms of malaise, mental depression, languor, sleepiness, loss of appetite, nausea, chills, repeated attacks of fever, general debility, nervous prostration, and pains in the bones are usually present and may last for weeks, months, or years, without other symptoms. Sooner or later, however, the more characteristic features of the disease, the bullous, macular, pigmentary, or tubercular skin lesions, make their appearance. These may appear separately, successively, or together. Sometimes the skin lesions are prominent symptoms of the disease; at other times they are subordinate. Other organs of the body, as the nerves, are also affected.

Two forms of leprosy are recognized, the tubercular and the anæsthetic. No absolute line, however, separates them; they often appear simultaneously upon different parts of the body, and one may pass into the other. The tubercular variety is characterized by the formation of masses of infiltration and tubercles. Other lesions are also found. An eruption of pemphigus-like blebs, showing

themselves irregularly for some time before the appearance of other lesions, is one of the earliest symptoms. It is said that these more frequently precede the macular variety of leprosy than the tubercular. Macules now make their appearance as smooth, shining, erythematous patches, sharply defined, infiltrated, not commonly raised above the level of the skin, yellowish or reddish in color, and growing dusky yellow and brownish as they grow older. Sometimes they are paler, and look like a piece of cut raw bacon set into the skin.

They are commonly surrounded by a pinkish or lilac border of small blood-vessels. The sensibility of the skin is altered from the beginning, the patches being at first hyperæsthetic and later anæsthetic. They may appear anywhere on the body, but most commonly upon the trunk and extensor surfaces of the extremities. Sometimes they are present in such numbers as to involve a considerable area of the body. They may disappear and reappear from time to time, or they may remain as permanent lesions, in which case they increase in size.*

Sooner or later the disease shows itself in the form of variously-shaped and sized nodules and tubercles, situated in the skin and subcutaneous tissues, which may develop into roundish, irregularly-shaped prominences and elevated masses, from cherry to walnut size, or larger, conspicuous and prominent, or slightly raised, and having a yellowish, brownish, or bronze color. They are more or less painful when pressed upon. They are usually found upon the face; and chiefly the forehead, eyebrows, cheeks, nose, lips, chin, and ears are apt to be invaded, giving rise to deformity, often of a hideous character. Later, the mucous

* The plates representing macular and tubercular leprosy, here given, are from Norwegian cases, and have been reproduced from Leloir's monograph on Leprosy.

membrane of the mouth, pharynx, epiglottis, larynx, and nares are attacked; the eye also suffers. Besides the face, other portions of the body, notably the trunk, buttocks, arms and legs, fingers and toes, are invaded. The course of the



FIG. 47.—TUBERCULAR LEPROSY—EARLY STAGE.

tubercle varies; it may last a long time without change, or it may soften or ulcerate at once, or it may be absorbed. Ulceration is apt to occur about the fingers and toes, the ulcers being covered with adherent brownish crusts.

The anæsthetic variety of leprosy may occur in conjunction with the tubercular variety or alone, in which case it is characterized by the presence of a number of symptoms in addition to the anæsthesia. Blebs are apt to appear, first



FIG. 48.—TUBERCULAR LEPROSY—LAST STAGE, WITH ULCERATION.

coming out in an irregular manner, from time to time, and being followed by pigmentation, and, after a longer or shorter time, by anæsthesia about the seats of the former lesions. In other cases, macules, like those which sometimes precede the tubercular form, come first. Hyperæ-

thesia of the skin sometimes occurs, with pains and burning sensations, followed by anæsthesia affecting a limited portion or the greater part of the surface. Later the skin



FIG. 49.—MACULAR LEPROSY.

becomes atrophic, dry, yellowish, or brownish in color, and more or less wrinkled.

Following this alteration in the structure of the skin, the subcutaneous tissues and muscles undergo atrophy, giving rise to deformity, especially of the fingers and toes ;

the hairs and nails become altered in structure or are shed; the hands and feet become greatly mutilated; the fingers and toes bent, crooked, and contracted. Sooner or later the bones are attacked, causing destruction of the joints and of the bones themselves; the skin over the joints becomes excoriated and ulcerated; the ends of the bones undergo disintegration, and the phalanges, finally,



FIG. 50.—NERVE OR ANÆSTHETIC LEPROSY, SHOWING PERFORATIONS OF HANDS.

either become absorbed or drop of. Even the hands and feet may gradually be lost; the extremities become more or less completely anæsthetic and are greatly wasted, at times to half their former size.

The disease does not usually give rise to much pain or suffering. Death occurs more commonly after some years, by diarrhœa or exhaustion.

The causes of leprosy still remain obscure. It is endemic in Africa, along the shores of the Mediterranean, and of the Atlantic and Indian Oceans, as well as in the interior of the country; also in Asia Minor, Arabia, Persia, India, China, Japan, Kamtschatka, the various islands of the Pacific Ocean, and Australia. In Europe, it is found in Norway, Southern Spain, Sicily, Greece, and Southern Russia. Upon the Western Hemisphere, it occurs in Mexico, Central America, the Islands of the West Indies, along the coast of South America, and especially in Brazil; it also exists in Iceland. There are old centres of the disease in Tracadie, N. B., in South Carolina, and in Louisiana. Norwegian emigrants have introduced it into Minnesota, but it has not spread, nor have the Chinese lepers in San Francisco and elsewhere conveyed this disease to natives. Within the past few years, cases of undoubted authenticity have been reported as occurring among natives of the United States who have never been out of the country nor come in contact with lepers.

Leprosy seems in many instances hereditary, and may be conveyed from parent to child through a series of generations. Concerning its contagiousness opinions differ. The weight of testimony seems in favor of its contagious nature.* The discovery of the bacillus lepræ places beyond doubt, I think, the contagious nature of leprosy from a purely theoretical and scientific point of view. Practically, however, we know so little of the circumstances favoring the growth, propagation, and transmission of this bacillus, and the clinical evidence is so contradictory, that we cannot class the affection with the contagious exanthemata or with syphilis as regards the practical danger of

* The admirable monograph of Dr. J. C. White, of Boston, "The Question of Contagion in Leprosy," *Am. Dermatological Association*, 1882, contains the most convincing clinical arguments yet brought forward in favor of the contagiousness of leprosy.

transmission. The most potent causes favoring the spread of the disease appear to be connected with climate, state of the soil, food, and habits of the people. The disease usually occurs among the lowest classes, but it may attack those in the most favored circumstances. It occurs in both sexes, and at any period of life.

The diagnosis of leprosy, in countries where the disease is endemic, is usually easily made. The earliest premonitory symptoms arouse suspicion, which the appearance of the cutaneous manifestations places beyond doubt. When the disease occurs sporadically, in countries where it is not endemic, it may, however, be mistaken for other affections.

The macular and tubercular varieties are apt to be mistaken for syphilis. The lesions of leprosy, however, are larger and more irregular in size and distribution. The pigmentation of leprosy is of a peculiar yellowish or brownish tint. The lesions have a smooth, glazed appearance. The tubercles are apt to be much larger than those of syphilis, being often hazel-nut- or walnut-sized, and are darker in color; their course is usually slower than that of syphilitic tubercles. The general expression of the face (the usual seat of the tubercles in leprosy), is much changed, the features having an ugly, leonine appearance. (See plates.)

Later, when the tubercles break down into ulcers, the blackish, adherent crusts which cover them are seen to be less bulky than those observed in syphilis. With ulceration come other very marked features of the disease, as anæsthesia, distortion of the hands and feet, absorption of bone tissue, and atrophy, all unmistakably characteristic.

The yellowish, roundish patches of macular leprosy should not be mistaken for vitiligo, although this may readily occur in the early stages of the disease. The health in vitiligo is generally good, and the decolorized patch of

disease consists of simple absence of pigment, with usually a border of increased amount of coloring matter. The skin is normal in texture. In leprosy, on the other hand, the macules are infiltrated with a lardaceous-looking substance, of firm consistence, and are generally anæsthetic or hyperæsthetic.

Morphœa, which is an affection of an entirely different nature (see *Morphœa*), presents lardaceous-looking patches, somewhat resembling those of macular leprosy. But the general health in morphœa is good, and the patches show normal sensibility and tend to spontaneous recovery.

The treatment of leprosy has thus far proved very unsatisfactory. As in the case of most diseases refractory to treatment, the remedies and pretended cures have been exceedingly numerous, but as they have failed for the most part, they need not be mentioned here. The remedies now employed are valuable in improving the general condition of the leper. Change of climate and residence, usually to a temperate and bracing atmosphere, is imperative. Strict hygienic rules should be adopted, including exercise and bathing, with the most nourishing food. Quinine and strychnia are important as tonics, and the usual alteratives may also be employed. Symptoms are to be treated as they arise.

Local treatment is valuable. Baths, plain or medicated with iron or sulphur, are said to be of service. Of recent remedies, ichthyol, the oil of cashew nut, gurjun oil, and chaulmoogra oil, internally and in the form of inunctions, are recommended on good authority. The formula for the use of gurjun oil is as follows:—

R.	Ol. gurjun,	$\frac{3}{4}$ j	
	Aquæ calcis,	$\frac{3}{4}$ iij.	M.

Churn well together, to make a cream. Apply to ulcers.

Cashew-nut oil is applied, pure or diluted with almond oil, to the anæsthetic patches, being rubbed in until it

nearly blisters. I think one part of the cashew-nut oil to three of the almond oil is strong enough to begin with, and as much friction, short of actual blistering or abrasion of the skin, should be used as the patient can bear. The oil of cashew nut should also be applied, pure, to the tubercles until they open, and then the sores may be dressed with gurjun oil, as above. Antiseptic dressings with extreme cleanliness should be practiced.

The prognosis of leprosy is unfavorable. A few cases of cure have been reported, when the patient has been placed upon energetic treatment from the earliest appearance of the disease. In the anæsthetic form of the disease the prognosis is more favorable.

Leprosy.—(See *Lepra*.)

Leukoderma.—(Congenital, see *Albinism*; acquired, see *Vitiligo*.)

Leukoplakia Buccalis.—(See *Mouth, Diseases of*.)

Lice.—(See *Pediculosis*.)

Lichen Agrius.—(See *Prurigo*.)

Lichen Pilaris.—(See *Keratosis pilaris*.)

Lichen Planus.—(See *Lichen ruber*.)

Lichen Ruber (*lī'-kēn*).^{*}—Lichen ruber is an inflammatory disease, characterized by pin-head or pea-sized, flat and angular, or acuminate, smooth and shining, or scaly, deep red, discrete or confluent papules, running a chronic course, and attended by more or less itching. Sometimes this itching is of extreme severity, leading to almost manic symptoms.

The acuminate form is rare. The angular form, *lichen ruber planus*, is that commonly met with, the papules varying in size from a pin-head to a split pea; often they coalesce and form patches. The shape of the papules is peculiar and

^{*} The nature of lichen is at present so variously interpreted that I have thought best to leave the article on this subject without modification for the present. Cf. Brocq (*l. c.*) and R. W. Taylor, Sajous' *Annual of the Medical Sciences*, vol. iv, 1890, A—15.

characteristic ; they are seldom round, as most papules, but are, instead, quadrangular or polygonal in form. They rise abruptly from the skin to the sixteenth of an inch or less, are flattened on the summit, and show a minute umbilication with whitish puncta. To the touch, they are firm, smooth, and without scales, excepting in those cases where the disease runs into a papulo-squamous stage. They are glazed, and of a peculiar dusky, crimson, or even violaceous tint. Usually discrete, the lesions are sometimes aggregated, so as to form sheets of raised and infiltrated lesions.

The diffused form of the disease is rarely seen in this country. It is made up of large patches of acuminate lesions. Itching is generally present in both varieties of the disease. It is usually moderate, but may at times be severe. The commonest locality of lichen ruber planus is on the forearms, especially upon the flexor surfaces of the wrists. It occurs also on the palms and soles and on the penis. It is apt to be symmetrical, and the lesions are sometimes arranged in rows. The course of the disease varies ; in some cases, under careful treatment, a cure can be effected in a few weeks or months, while other cases run an exceedingly chronic course, even extending to years. Persistent, dark brown, or violaceous stains succeed the lesions. The severer forms are said to run a graver course, and to end sometimes in marasmus and death.

The cause of lichen ruber is generally to be found in exhaustion, nervous debility and depression, overwork and improper diet, leading to impoverished nutrition.

Lichen ruber may be mistaken for the papular syphiloderm, which it closely resembles, especially in the coppery or ham color of the lesions. In the variety *L. ruber planus*, however, the peculiar shape and contour of the lesions, with their smooth, umbilicated, or punctate surfaces, will serve to distinguish them. Eczema papulosum, which often resembles lichen ruber, differs in that the papules are

roundish, somewhat acuminate, bright red in color, and intensely itchy. Their evolution also is different.

The internal treatment of lichen ruber should be chiefly tonic and supporting. Arsenic is of high value, and is, in fact, almost a specific. The dose, at first two to four minims of Fowler's solution, in a fluidrachm of wine of iron, should be increased almost to the limit of tolerance, and persisted in. Arsenic may also be administered hypodermically, using one part of Fowler's solution and five parts of water, beginning with four or five minims of the mixture. The preparations of iron and cod-liver oil are also useful. Valerian, the bromides, tincture of belladonna, 2-grain pills of carbolic acid, up to eight daily, may relieve the itching. If an urticarial element is present, quinine and ergot may be employed if belladonna fails. Treatment should be instituted early in the course of the disease. Cases of long standing are very stubborn, even to the best directed treatment, which, earlier given, might have proved effectual.

Locally, simple ointments, as vaseline or cold cream, may be employed when itching is not present. When the eruption itches, alkaline baths, carbolic acid washes or ointment, dilute hydrocyanic acid, with water, diluted "liquor picis alkalinus," made thus:—

R.	Potassæ caustic, . . . . .	. gr. xv	
	Picis liquidæ, . . . . .	. gr. xxx	
	Aquæ,	f ℥ iv.	M.

may be employed. It should be considerably diluted at first.

The following ointment is a useful one:—

R.	Olei rusci crudi (vel. ol. betule),	℥ j	
	Ung. aquæ rosæ,	℥ j	
	Ol. rosæ,	℥ xx.	M.

In addition to these, the more stimulating and stronger antipruritic remedies mentioned under the head of eczema

may be employed, with the hope of reducing the pruritus and bringing about absorption of the lesions. The following ointment has proved of high value in *L. ruber planus*:—

R.	Hydrarg. bichlor.,	gr. ij-iv	
	Acidi carbolici,	gr. x-xx	
	Ung. zinci oxidi,	℥j.	M.

Hot douches and compresses, once or twice daily, often give relief in severe cases. Occasionally removal from ordinary surroundings, and especially a sojourn at high altitudes, may be required. Chrysarobin, a 10 per cent. solution in chloroform, or as an ointment, is sometimes useful in chronic cases.

The prognosis of lichen ruber will depend upon the extent of the eruption, its duration, and the patient's general condition. Localized eruptions of *L. ruber planus* on the wrists and forearms, occurring in persons of average health, do not usually require a very lengthened course of treatment for their cure. When, however, the eruption is extensive and severe, and has lasted a long while, the prognosis is much less favorable.

Lichen Scrofulosorum is a very rare disease in this country. It is a form of tuberculosis. It is characterized by the appearance of pin-head-sized papular lesions, of a reddish color, and tending to form in groups over the chest, back, and abdomen. It resembles papular eczema, but does not itch. It is said to occur in scrofulous young persons about the age of puberty. The disease always yields to treatment. Cod-liver oil, internally and externally, cures it. (See *Tuberculosis of the Skin*.)

Lichen Simplex was the name formerly given to papular eczema. (See *Eczema*.)

Lichen Tropicus.—(See *Miliaria*.)

Lichen Urticatus.—(See *Urticaria*.)

Lineæ Albicantes.—(See "*Striæ et maculæ atrophicæ*," under the head of *Atrophy of the Skin*.)

Liodermia Essentialis, etc.—(See *Angioma pigmentosum et atrophicum*.)

Lip, Fissured.—(See *Eczema of Lip*.)

Liquor Gutta Perchæ.—A solution of one part of gutta percha in nine parts of chloroform. It is known in Germany and France as "Traumatacin."

Liver Spots are either discolorations of the skin (see *Chloasma*, *Lentigo*), or are due to a local parasitic disease (see *Tinea versicolor*).

Louse.—(See *Pediculosis*.) Body louse, *P. vestimentorum*. Head louse, *P. capilitii*. Crab louse, *P. pubis*.

Lupus Erythematosus.—Lupus erythematosus is a cellular new growth, clinically resembling an inflammatory disease, but apt to result in superficial scarring, characterized by one or more circumscribed, roundish or irregularly shaped, variously-sized, reddish patches, covered with grayish or yellowish, adherent scales, or by the occurrence of erythematous or telangiectatic lesions. The disease usually begins in the form of one or more roundish, pin-head to small pea-sized, erythematous patches, which enlarge upon their periphery, and often coalesce to form larger, irregularly-shaped patches. After a time the patches increase in thickness and show more infiltration, and when fully developed there may be a number of patches, varying in size from a split pea to a silver dollar, or the palm of the hand, having usually a distinct and clear-cut marginal outline. In color they are reddish or violaceous, and are sometimes covered with fine or coarse, grayish or yellowish, remarkably adherent scales, at times scanty, at other times forming sebaceous-looking crusts, like those found in seborrhœa of the face. They are firmly attached to the openings of the sebaceous glands, which are often plugged up with sebum or denuded and patulous. In other cases, the eruption does not seem to involve the sebaceous glands in particular, but seems purely erythema-like in form and appear-

ance. The patch spreads on its margin, which is usually higher than the centre, the latter being commonly paler, and often showing atrophic depression. After a variable time the patch attains a certain size, and may remain stationary. There is never any moisture or discharge in connection with the disease. Sometimes it seems to spread by the occurrence from time to time of erysipelas-like attacks, after the cessation of which the area of permanent disease will be seen to have increased and new circles to have formed.

Lupus erythematosus is usually found upon the face, one or both cheeks, below the eyes, and the bridge of the nose, being the commonest seat of the affection. Often both of these localities are attacked by the disease, which forms the rude figure of a butterfly with outstretched wings. The muco-cutaneous and mucous surface of the lips, the ears, scalp, back, and other parts of the body may be attacked. Lupus erythematosus is remarkable for its chronicity and may persist through life. It tends to increase, from time to time, by repeated attacks. Ultimately, the process generally ends in the formation of a superficial cicatricial tissue.

The subjective symptoms vary in different cases, depending somewhat upon the activity of the disease. At times there is much burning and itching, while in other cases there may be no subjective symptoms.

Lupus erythematosus is a form of tuberculosis of the skin. (See *Tuberculosis of the Skin*.)*

Females are more liable to it than males, and light- than dark-haired persons, and it occurs notably on those who are subject to disorders of the sebaceous glands, sometimes, indeed, appearing to originate in a patch of localized seborrhœa.

* Hallopeau (*Annales de Derm. et Syph.*, 1892, p. 284.)

When fully developed, the typical patch of lupus erythematosus offers such a striking picture, with its reddish or violaceous color, its sharply circumscribed outline, its infiltrated surface, occasionally studded with plugged-up or gaping sebaceous openings and covered with adherent sebaceous scales, and its place of election, the nose and cheeks, that it can scarcely be mistaken for any other disease. It is to be distinguished from lupus vulgaris by the absence of papules, tubercles, and ulceration. The sebaceous glands are not affected in lupus vulgaris. Lupus erythematosus rarely begins before puberty; lupus vulgaris usually begins in childhood. Lupus vulgaris is a deep-seated disease, and is attended, sooner or later, with ulceration and disfiguring cicatrices; lupus erythematosus is comparatively superficial. Psoriasis sometimes resembles lupus erythematosus very closely, but may be distinguished by its course and by the various symptoms peculiar to it. Syphilis sometimes resembles lupus erythematosus superficially, but its history is very different.

DIFFERENTIAL DIAGNOSIS

BETWEEN

LUPUS ERYTHEMATOSUS.

1. Does not usually appear until some time after puberty.
2. Initial lesion is erythema, which is comparatively superficial.
3. Orifices of sebaceous follicles, not infrequently gaping and distended with hardened sebum plugs.
4. Never ends in ulceration.

LUPUS VULGARIS.

1. Often appears in childhood, or about the period of puberty.
2. Isolated minute nodules, and peculiar currant-jelly-like deposits.
3. Sebaceous follicles, not especially involved.
4. Very commonly ulcerated in parts, at least in some stage of its course.

LUPUS ERYTHEMATOSUS.

1. If scales are present, they consist chiefly of epidermis, and the under surface sends little processes into the sebaceous follicles.

2. Skin beneath crusts is dry and dusky red or violet.

3. Sebaceous follicles are filled with hardened sebum plugs.

4. On disappearance, a cicatricial appearance of the skin is left.

LUPUS ERYTHEMATOSUS.

1. Often of many years' duration.

2. Oftenest met with on face, ears, and head.

3. More or less symmetrical.

4. Color dusky red or violet.

5. Never the seat of ulceration.

6. Occurs in strumous subjects.

7. Very obstinate and little influenced by constitutional remedies.

8. Sebaceous follicles often patulous, and plugged with plugs of sebum, and scales very adherent.

ECZEMA SEBORRHÆICUM.

1. Crusts consist chiefly of sebaceous matter.

2. Skin beneath crusts is oily, but otherwise healthy or slightly reddened.

3. Sebaceous follicles are filled with soft, white, sebum plugs, which escape in great numbers on pressure.

4. Leaves no trace behind it.

LATE SYPHILODERM.

1. Chronic, but not nearly so markedly so.

2. Common on the face, though never assumes the butterfly form sometimes taken by *L. erythematosus*, and other parts frequently involved.

3. Generally non-symmetrical.

4. In the later stages brownish or coppery.

5. Ulceration common.

6. Occurs in syphilitic subjects, and other manifestations of syphilis may be present.

7. Removed by anti-syphilitic remedies, local and constitutional.

8. Sebaceous follicles not usually involved. If scales are present, they are thin and not very adherent.

(*McCall Anderson.*)

The results of treatment in lupus erythematosus are extremely varied. In one case the therapeutic measures employed will prove rapidly and easily successful, while in another apparently equally light case every known method of treatment may be exhausted without producing more than a temporary effect on the course of the disease. Besnier says that nothing is more deceptive than the therapeutics of lupus erythematosus, even allowing for recent incontestable advances. Spontaneous cures, speedy success with the most simple and the most diverse methods, frequent relapses, often failure, even when recourse is had to the most active measures—this is what the practitioner has to expect in the treatment of lupus erythematosus. Internal remedies are called for in some cases. They are to be selected to meet the especial indications which may be manifested. Iodine, arsenic, iodide of potassium, and cod-liver oil may, one or another, often be employed with advantage. Hygienic measures, chiefly nourishing diet, fresh air, and sea bathing, are important.

The external treatment is that which will usually be found most available and of the greatest value. In the milder forms of the disease it is to be remembered that patches often disappear without leaving a scar. Care must be taken, therefore, not to make matters worse than they would naturally turn out. No strong caustics are to be used in such cases. Stimulating applications may be first tried. The following mild stimulant is useful when the patches are more erythema-like in appearance, recent, spreading, and superficial, with little infiltration and no involvement of the sebaceous glands:—

R.	Zinci sulphat.,		
	Potassii sulphuret.,	. . . . . āā	℥ ss
	Aquæ rosæ,	. . . . .	f ℥ iiii ss
	Alcoholis,	. . . . .	f ℥ iij. M.

If this is too strong, it may be diluted, but if it agrees,

the first two ingredients may be increased in quantity to one drachm.

A somewhat stronger stimulant, but one useful in the form of lupus erythematosus just described, as well as in cases where there is more infiltration, is the following:—

R.	Chrysarobin,	3 iiss	
	Acidi salicylici,		
	Pulv. calaminis,	3 ss	
	Ætheris,	3 j	
	Collodii flexile,	3 v.	M.

A 10 per cent. to 20 per cent. salicylic acid rubber plaster may be employed at times to advantage.

Sapo viridis is also a good stimulant application, relieving the disease by itself alone when used in mild cases. It may be applied spread upon cloth in the form of a plaster, or rubbed in with water. Dissolved in one-half its weight of alcohol, it forms the “spiritus saponis kalinus,” of even more value as an outward application. The patches are to be well scrubbed with the spirit, until any scales that may be present are removed, when it may be washed off with water and some mild ointment applied. Mercurial ointment is useful in some cases, prepared as a plaster, and applied continuously. Sulphur may sometimes prove serviceable applied in the form of an ointment, a drachm or more to the ounce. Pyrogallic acid has been used with success in the form of an ointment, a scruple to a drachm to the ounce, or in collodion. This, it must be remembered, is a semi-caustic, and its effects must be watched. Stronger and even caustic applications are demanded in some cases, but they should never be used until the weaker ones have been tried. A solution of caustic potassa, one part to three or six of water, is one of the best of these. It may be applied by means of a charpie brush upon a stick. Fuming nitric acid may also be used; it is less painful than the potash.

The galvano-cautery has sometimes been used with suc-

cess, as also has the curette or scraping spoon, but in cases demanding, from their extent and infiltration, such strong measures, the practice of linear scarification is better than any of the caustics or other strong remedies just mentioned. This may be carried out by using a fine scalpel or tenotome, or the multiple scarifier (see under *L. vulgaris*), holding it in the hand like a pen, and making a series of parallel incisions about one-sixteenth of an inch apart, and extending entirely through the skin. Having covered the patch to be operated upon with a series of incisions running in one direction, a fresh series, perpendicular to the first, should follow, and even a third series may be practiced, until the diseased skin is fairly hashed up by the knife. Excepting in persons of particularly tough fibre, it will be necessary to freeze the skin, with a little bag of ice and salt, or by means of ether or rhigolene spray, before operating. Bleeding may be checked at once by the application of absorbent cotton with pressure. Successive patches of a square inch, more or less, may be operated on daily, until the entire surface has been covered. The wounds should be dressed with some antiseptic preparation, as euophen or aristol. When the wounds are healed, which will be very soon, the operation can be repeated on any patches that may have escaped. Scarification thus accomplished leaves little scar, and gives more satisfactory results than any other treatment. Scarification is most useful in that form of the disease called by the French "Lupus erythemato-acneique," and by the Germans "Lupus erythemato-discoides." The lesions here are circumscribed but deep, extending even through the derma and involving the subcutaneous connective tissue.

Another form of treatment highly recommended is that by means of the Paquelin cautery, heated barely red and run over the surface of the disease very superficially. If one operation is not enough to cover all the ground the

remainder may be covered at another sitting. Iodoform is then applied, which forms a crust. After ten or twelve days this falls off, leaving a smooth, pale surface.

Lupus Exedens, a name given in former times to a rapidly eroding, ulcerative disease of the face, usually infiltrating epithelioma, rodent ulcer, or syphilis. (See *Epithelioma, Ulcer, rodent, Syphilis of the skin, ulcerative*), rarely true lupus.

Lupus Vulgaris.—Lupus vulgaris is a very chronic, new cell growth, depending upon infection with the bacillus tuberculosis (see *Tuberculosis of the Skin*), characterized by variously-sized and shaped, reddish or brownish patches, consisting of papules, tubercles, or flat infiltrations, usually terminating in ulceration and cicatrices.

The disease varies in appearance in different cases, and also according to the locality attacked and the stage of its development. It usually begins by the formation of small, yellowish-red or brown points under the skin, which increase in size, coalesce, and form irregularly-shaped, roundish or serpiginous, ill-defined patches of various size. The points referred to enlarge until they form papules, and finally tubercles. (See colored plate, Fig. F.) It is at this stage that the disease usually comes under notice. The lesions are of all sizes, from pin's head to split pea, are brownish- or yellowish-red in color, and are covered with a thin layer of imperfectly-formed epidermis. They are firm or soft, and are painless. At this stage of development the disease may retrograde and terminate in absorption of the lesions, leaving a thin, desquamative, cicatricial tissue, or it may go on to ulceration and complete destruction of the infiltrated skin, resulting in much disfigurement. In its earlier stages lupus vulgaris is rarely attended with any subjective symptoms, but later there is sometimes pain. The commonest seat of the disease is about the face, especially the nose, cheeks, and ears. It frequently attacks

the extremities, especially the fingers, where it may result in serious deformity. The limbs and trunk may also be involved. Lupus vulgaris is a destructive disease, often resulting in serious disfigurement. It spares none of the external tissues, and may invade the mouth, cartilages of the nose, ear, larynx, and even the eye.

The disease usually originates in childhood. It is never congenital. It is rarely, if ever, hereditary. It is much commoner on the continent of Europe than in Great Britain, and is very rare among natives of the United States. I do not remember to have met with a lupus patient who was born in this country, though I cannot say that it never attacks the native American. It is a disease of the lower classes, not commonly attacking the well-nourished, but usually the debilitated and ill-fed. It is believed to be closely related to tuberculosis of the skin and other organs, although full agreement has not yet been reached by observers.

The diagnosis of lupus vulgaris from syphilis, the disease with which it is most likely to be confounded, is chiefly to be made by the history of the case in question. In addition, the ulcers of lupus are comparatively superficial; those of syphilis ordinarily deep, and often have an excavated appearance. The ulcer of lupus is commonly less extensive than that of syphilis. In lupus there are, as a rule, a number of points of ulceration which tend to become confluent; whereas, the ulcers of syphilis usually remain distinct. The border of the syphilitic ulcer is sharply defined; that of lupus is not apt to be so. The secretion of the syphilitic ulcer is apt to be copious and offensive; that of lupus is scanty and inodorous. The crusts of lupus are thin and brownish; those of syphilis are bulky and frequently have a greenish tinge. Lupus is slow in its course; syphilis is rapid. A syphilitic ulcer may

form in five or six weeks, while it may take as many years for the lupus disease to give rise to so much destruction. The scar of lupus is distorted, hard, shrunken, and yellowish. That of syphilis is whitish, smooth, thin, often surprisingly small, considering the destructive process which has gone before. A history of other syphilitic symptoms is sometimes, though by no means always, to be obtained in syphilitic ulcer, and too much stress must not be laid on the absence of this.

Lupus may be confounded with epithelioma. Though the diseases may occur together, yet such occurrence is rare. The localization of epithelioma, with its usually painful character, and the circumscribed induration of the lesion, will usually serve for the diagnosis. The ulceration of epithelioma generally starts from one point and spreads peripherally, while the ulceration of lupus usually begins at many points within the patch. Epithelioma very seldom occurs in the young; lupus begins in childhood.

Lupus vulgaris is to be distinguished from *L. erythematosus* by the occurrence of ulceration, which never takes place in the latter. The patches in *L. erythematosus* are superficial, uniformly reddish in color, and are covered with adherent, grayish scales. They are, moreover, circumscribed, and are without papules or tubercles. The sebaceous glands and follicles are generally markedly involved in *L. erythematosus*; in *L. vulgaris* they remain unaffected.

Acne rosacea at times bears some resemblance to lupus vulgaris, but may readily be distinguished by its dilated vessels, color, the presence of acne pustules, its history, and its course.

DIFFERENTIAL DIAGNOSIS

BETWEEN

LUPUS VULGARIS.

EPITHELIOMA.

1. Commences usually before the age of twenty-five, and often much earlier in life.

2. An indolent, painless affection.

3. Edges of patches, though often round and elevated, are soft.

4. Ulcers in most cases superficial, soft, throwing out profuse granulations and edges often undermined.

5. The nose is the part of the face oftenest attacked.

1. Occurs usually in persons getting on in years.

2. Tingling, itching, crawling sensations in earlier stages, pain, sometimes lancinating, later.

3. Edges hard, everted, and often having a glistening, translucent appearance.

4. Ulcers oftener deep, hard, with uneven, finely granular appearance and exuding a sticky fluid, which gives a varnished appearance to the surface.

5. The nose is not more frequently attacked than other parts of the face.

LUPUS VULGARIS.

LATE FORMS OF SYPHILODERMA.

1. Commences in early life, usually before twenty-five.

2. Often a history of hereditary tendency to strumous affections.

3. Oftenest met with on the face.

4. Ulceration has a tendency to throw out profuse granulations, and edges often undermined.

5. Color of lesions yellowish-red or violet.

6. Often of many years' duration.

7. Cured by the use of caustics and anti-strumous remedies.

8. Often other manifestations of the tuberculous diathesis.

1. Appears usually after the age of twenty-five.

2. History of syphilis having been acquired.

3. On any part of the body, though often on the face.

4. Ulceration, as if cut out with a punch, and base ash-gray.

5. Eruption in chronic stage usually ham or copper colored.

6. Chronic, though not nearly so much so.

7. Cured by mercury or iodine.

8. Generally other manifestations of syphilis.

The treatment of lupus vulgaris is chiefly local, though constitutional remedies are also to be employed. It appears to be somewhat more amenable to internal treatment in this country than abroad. It is, however, one of the most obstinate of all cutaneous diseases. Hygienic treatment is of great importance. Cod-liver oil is the most efficient internal remedy, and, next to this, iodide of potassium. It may be given with the oil, as may also iodine and phosphorus. Internal remedies should usually be well tried before external applications are made, as they alone sometimes suffice to obtain a cure. The external remedies used in the treatment of lupus vulgaris are of a mechanical nature, or comprise various caustics. They should be selected with a view to the extent, locality, and character of the lesions in any given case. In the earlier stages stimulating applications may be employed, with a view to bring about absorption. Equal parts of tincture of iodine and glycerine, painted over the part, mercurial plaster, tar, and ointment of the red iodide of mercury may be used for this purpose. I must confess, however, that in my hands these milder remedies have usually failed of success, and I have always, sooner or later, had recourse to more severe measures before a cure could be obtained. Of true caustics, potassa, nitrate of silver, arsenic, carbolic acid, acetate of zinc, chloride of zinc, and pyrogallic acid may be mentioned. The first and last of these I believe to be most efficient.

Caustic potassa should be used when thorough and extensive destruction of tissue is desired. A stick of the caustic should be wrapped in a bit of rag, with only the point protruding, and this should be bored into all the disease-foci, which will be found to break down easily. It should be remembered that the effect of this caustic goes somewhat beyond the point touched. Dilute acetic acid or vinegar should always be kept at hand to limit and check

the spread of the caustic and to neutralize it. The pain is severe for the moment, but ceases on the application of the acetic acid or vinegar. Nitrate of silver is efficient in some cases, and does not leave scars. Papules and tubercles may be destroyed by boring into them with the solid stick, while patches are most successfully treated by the saturated solution repeatedly applied with the charpie brush. Nitrate of silver is one of the best caustics to use in operations on lupus about the face, but it does not penetrate deeply.

The following formula of Unna's is also recommended :—

R.	Hydrarg. bichlor.,	gr. iij	
	Acid. carbolic.,	gr. xij	
	Alcoholis,	f ʒj.	M.

A small, sharpened stick is dipped into this solution, and bored into each little lupus deposit. The pain is brief.

Pyrogallic acid, in the form of ointment, one drachm to the ounce, applied thickly spread upon cloths, and renewed twice daily, is painless and efficient in many cases. It selects the diseased tissue and acts but little, or not at all, on the healthy. Chloride of zinc is used according to the following formula :—

R.	Zinci chloridi,		
	Antimonii terchloridi, . . aa	ʒ ij	
	Acidi hydrochlorici,	q. s.	M.

Enough acid is added to dissolve the chloride of zinc, and the mixture rubbed up in a mortar with enough powdered liquorice to make a paste. This is spread upon a cloth and applied while moist. It is a powerful caustic, very painful, and eats through healthy and diseased tissue alike. It has the high sanction of Hebra, but I have never found occasion to use it.

Ethylate of sodium is an excellent application, and being less painful than some other caustics, may be preferred in small operations not demanding an anæsthetic.

It should be applied on a glass rod, the parts dried so far as possible, and no water should be allowed to touch the parts while the ethylate of sodium is being applied.

Erasion, or scraping by means of the curette or scraping spoon, is useful in many cases, and is a plan of treatment I



FIG. 51.—DERMAL CURETTES.

can highly recommend from experience. The instruments are cup-shaped, of steel, with sharp edges, and fastened by a short shank to a convenient handle. In size, they vary from a split pea to half the size of a teaspoon.

The part to be operated upon is first frozen by means of a hand-ball atomizer, charged with ether or rhigolene, or by the application of a gauze bag filled with powdered ice and salt, and the diseased tissue is scraped or dug out. If any of the diseased tissue is left, a recurrence of the lupus must be looked for; the operation, therefore, must be thorough. Small nodules remaining may be removed by the use of the dental burs and excavator here pictured, as suggested by Dr. George H. Fox, of New York. Scraping may often be appropri-



FIG. 52.—DENTAL HOOKS AND BURS.*

ately supplemented by the application of caustics, as pyro-gallic acid, caustic potassa, or even the actual or galvano-

* In ordering these instruments, they should be designated plainly as Excavator, No. 10, and Round Burs, Nos. 3, 8, and 11, of the S. S. White Dental Manufacturing Company's list for 1888.

cautery. One of the best forms of treatment is by linear scarification. Squire has devised a multiple-bladed knife, by which this operation, over large surfaces, is much facilitated.

The scarifier pictured below is one which I have devised, employing the principle suggested by Squire, with an arrangement of the blades suggested by Pick. In my instrument, five blades, shaped like those commonly employed for gum lancets, are arranged parallel to one another, the central one being fixed in a small ivory handle, and the others being removable so as to facilitate their cleansing. The handle of the instrument is to be held like a pen, and a series of parallel cuts are to be made, going as deeply as is considered necessary. Cross cuts are then made, and the cross hatching is continued until, in severe cases, the whole surface is hashed up. After excision or scarification a caustic



FIG. 53.—MULTIPLE SCARIFIER.

should be applied, with antiseptic dressing to follow. The operation may have to be repeated, but in the end a clean, healthy scar is the result.

Bésnier considers that lupus vulgaris is often transmitted by the "bloody operations," as they are called, such as excision, scarification with knives, erosion with curettes, etc. He therefore recommends the employment of the electro-cautery.

Bésnier employs a number of electro-cautery knives of various shapes, with the view to reach all the various sized and shaped deposits of lupous tissue in the skin. Many of these I habitually employ. (See Fig. 18.) My favorite knives are the flat-bladed knife and the point. The handle employed and also the battery are figured under *Electricity in the Treatment of Skin Diseases*.

When only a small space is to be covered, most patients can endure the pain, which is but momentary. When a considerable area is to be operated upon, however, ether must be administered.

The knives are to be heated to a dull cherry-red, and as most operations are about the face, some care must be exercised to avoid ignition of the ether when this anæsthetic is employed, and even more when rhigolene spray is used.

The prognosis of lupus vulgaris will depend upon the form of the disease, its duration, the age of the patient, and the extent of surface involved. The disease, in any case, is very stubborn, and runs a chronic course. If it be confined to one patch or region, a more favorable termination can be looked for. The disease usually results in marked scarring and deformity.*

Lymphangiectasis.—Bésnier and Doyon divide these lesions of the skin into (*a*) *acute superficial irritative lymphangiectasis*, and (*b*) *chronic deep irritative lymphangiectasis*. The first are rare and little known. The second variety are usually found upon the lower limbs, and are characterized by small, pea-size tumors, presenting in the centre a soft spot, which opens, giving issue to a sanious or lymphatic discharge, lymphatic fistulæ, resting on a violaceous base, œdematous, phlegmonous, indurated, cicatricial. They are caused either by some ordinary irritation, or, perhaps, more likely, by a specific irritant, not improbably the bacillus tuberculosis.

Lymphangioma (*lîmf-ăn-jî-ô'-ma*).—New growths of lymphatic vessels in the skin have been noted as constituting a cutaneous disease, and have been described as "lymphangiomata." Wegner divides these into (*a*) *lymph-*

* An excellent article on lupus of the vulva will be found in Sajous' *Annual of the Univ. Med. Sciences*, 1890, vol. ii, H—7.

angioma simplex; (b) *lymphangioma cystoides*; (c) *lymphangioma cavernosum* (or "circumscriptum" of Morris).

The latter affection, known also as lymphangiectodes, is an extremely rare affection, characterized by deeply-placed colorless or rose-colored vesicles, irregularly disposed in groups, and occurring on the face, the neck, the limbs, or the trunk. When opened, a clear alkaline liquid, containing lymph-corpuscles, exudes. The nature of the affection is not known. It is supposed, however, to be of lymphatic origin, and produced by a dilatation of the lymphatic canals of the skin.

The treatment is destruction, preferably by electrolysis or the actual cautery.

Lymphangioma tuberosum multiplex is a somewhat similar condition, cases of which have been described by Pospelow, Kaposi, and myself. The affection is of very rare occurrence, and is characterized by the appearance of numbers of tumors scattered, or in groups, over the general surface of the trunk. The lesions vary from small split-pea to hazel-nut size, of a reddish-brown or bluish-white color, smooth, rising from the surface, and rounding into it. On pressure over the larger lesions, the finger sinks deeply into the tissues, as into a bladder filled with fluid. They are accompanied, in some cases at least, by numerous lesions of fibroma molluscum.

Microscopic examinations show the tumors to be composed of connective tissue, traversed by numerous lymphatic dilatations. Bésnier considers the disease identical with the "benign cystic epithelioma" and the "eruptive hydradenoma" described by Jaquet and Darier.* (See also *Angioma*.)

* Noyes and Torok (*British Journal of Dermatology*, December, 1890), under the name "*Lymphangioma capillaris varicosum*," give an excellent general review of the subject, with personal observations and the results of microscopic examination.

Maculæ Atrophicæ.—(See *Atrophy of the Skin*.)

Madura Foot.—(See *Fungous Foot*.)

Malignant Papillary Dermatitis.—(See *Dermatitis, Malignant Papillary*.)

Malignant Pustule* is due to the inoculation of a peculiar, virulent poison, generated in cattle suffering from a

* The following case of anthrax, kindly communicated to me by Dr. Morris Booth Miller, is of interest on account of the rarity of the disease in this city. E. H., 50 years of age, born in Ireland, a brushmaker by occupation, applied at the surgical clinic of the Philadelphia Polyclinic, June 24, 1895. His previous history presented no facts of interest. He had been steadily engaged in brushmaking for some years, and had been using hog-bristles and horse-hair which had come from Siberia. On the evening of June 21st he noticed a small lump on his neck below the left ear. It was not painful and he paid no attention to it. The next morning some swelling of the neck had appeared and the lump looked like a small red pimple. By evening the swelling had extended down the neck and under the chin to the right side. Weakness and prostration rapidly supervened. The lesion rapidly enlarged and assumed a bluish discoloration like a bruise. On the 23d vomiting and diarrhœa came on with insomnia and severe pains in back and joints, with headache.

On examination the patient seemed profoundly affected. There was extreme œdema of the entire anterior portion of the neck, so as to give the appearance of a dewlap. On the left side, 4 mm. below the ear, was a small dusky-purple spot about 1 cm. in diameter, which was surrounded by a single, and in parts double, row of blebs filled with yellow serum. There was no apparent supuration.

Radiating anteriorly from the lesion were seen reddish lines, indicating the presence of lymphangitis. There was no tenderness on pressure, nor did the patient complain of pain in the affected parts. On admission to the hospital sleep became normal and the patient's pulse was 116.

Cultures undertaken to confirm the diagnosis of anthrax, which had been made from the clinical symptoms, grew in about four hours in characteristic masses. At 3 A. M., June 25th, the patient died with symptoms of profound toxæmia.

A brief report of the autopsy showed large quantities of hæmorrhagic fluid in the pleural, pericardial, and abdominal cavities. The blood was dark and completely fluid. The spleen was large and very friable. The liver was soft and congested. The stomach showed near the cardiac orifice a small, irregular ulceration. The intestines outside were marked by numerous areas of hæmorrhagic injection, some opposite to and some at the mesenteric attachment.

disorder known by the name of "murrain" or "charbon." The hands are usually inoculated first in persons engaged in dealing with cattle and hides, and after an incubation of only a few hours, pain, burning, and itching are experienced at the point inoculated, followed by the formation of a vesicle or pustule, with an extensive hard areola; the pustule increases to the size of a quarter-dollar, and soon breaks into an unhealthy, discharging ulcer. The constitutional symptoms are usually severe; a fatal result is not uncommon. It is said that the disease can be conveyed by flies.

The treatment consists in promptly destroying the diseased patch with caustic potassa, and applying disinfectant poultices and washes. The patient is to be supported by stimulants, etc.

Massage in Skin Diseases.—The subject of massage in the treatment of diseases of the skin is one which has not as yet been adequately investigated. Unquestionably, the good effects upon the general economy produced by this method of treatment may be brought into service in all cases where improvement in the general health and increase in healthy tissue change is desirable, but in the large class of cases where inflammatory lesions of the general surface are present, massage must be employed with much precaution to prevent the distribution not only of such parasitic elements as may exist in the actual skin lesions, but to avoid the distribution and re-implantation of the numerous micrococci which are normally present in the external layers of the epidermis and in the mouths of the

These hæmorrhagic areas varied from 5 to 8 cm. in diameter. They were mostly in the jejunum and upper part of the ileum. On opening the intestine these hæmorrhagic areas showed softening, with erosions and ulcerations occupying the central part of the suffused area.

Cultures taken from the body fluids and tissues showed the presence of the *bacillus anthracis*.

follicles, and which only need the opportunity of a more succulent nidus to multiply and flourish.

Eccles* says that the local effects of massage upon the skin vary with the character of the manipulations. Light friction produces the same effect as the application of a cold impression, but with the following difference: The initial effects,—contraction of the muscular fibres of the erectores pili and of the cutaneous vessels, producing the condition known as goose-skin,—are the same in each case. If the application of cold is continued, the circulation through the cutaneous area so treated is slowed, there is venous congestion, overfilling of the lymphatics, and consequent tumefaction of the part. On the other hand, the continuous application of friction produces contraction of the cutaneous musculature and of the vessels, followed by relaxation; pallor is replaced by the warm redness characteristic of more rapid circulation and arterial hyperæmia; and if the vigor of the manipulation be increased to firm rubbing, the loose epithelium is removed, the contents of the sebaceous follicles, previously compressed during the stage of goose-skin, are expelled by the friction of the operator's hand, dilatation of the superficial cutaneous arterioles occurs, and insensible perspiration ensues. At the same time—the friction being always exercised centripetally—the lymphatic vessels are unloaded and the venous circulation is stimulated. If to the firm friction of the skin the manipulations of rolling and squeezing be added, the superficial tissues being lifted, as it were, from the subjacent fascia, and the whole thickness of the cutis and of the subcutaneous tissue thoroughly kneaded, the vascularization of the part is greatly increased, while, at the same time, the lymphatic spaces are drained. Thus absorption, both by lymphatics and blood-vessels, is accelerated.

* "Massage in Diseases of the Skin." *Lancet*, October 14, 1893.

In addition, such manipulations produce marked effects upon the local temperature, as proved by the elaborate and exhaustive investigations of Eccles. He calls the superficial manipulations "shampooing," and reserves the term "massage" to describe the deeper manipulations in which the deep fascia and muscles have also been kneaded.

"Shampooing" causes the surface temperature to fall. After firm friction, rolling, squeezing, and kneading, a rise occurs. Occasionally, when one limb is thus treated, the surface temperature rises, while that of the opposite limb falls. Tactile and temperature sensibility are increased after a course of massage, and galvanic conduction is improved. The latter effect is significant in connection with the cataphoric treatment of skin diseases by the constant current. (See *Electricity in Skin Diseases*.) Eccles thinks that medicated powders may more easily be introduced through the skin after massage than the same medications in ointments before this procedure is employed.

As regards the employment of massage in the treatment of specific skin affections, the literature of the subject is somewhat scanty, and is mostly scattered through various periodicals. I can only note a few points here, suggesting reference to the general principles and physiological facts above given, and repeating the caution regarding indiscriminate use of this remedy.

In acne, so far as my experience has gone, the most sluggish forms are those in which massage is chiefly likely to be useful. Disinfection of the surface by bichloride washes and soaps previous to the operation, scrupulous disinfection of the operator's hands, caution in the earlier stage of the treatment, with, in some cases, the employment of borated vaseline, are desirable. Immediately after the operation the surface should again be disinfected. I have seen a sudden outbreak of acne pustulosum follow massage of the face, and even boils have sometimes resulted

as the effect of pressing the staphylococcus pyogenes into more succulent localities.

In prurigo and pruritus massage may often be employed with benefit; also, in scleroderma, the neuroses in general, and in cases where chronic inflammatory indurations exist. The more superficial modes of massage should first be employed.

Medicinal Eruptions.—(See *Dermatitis medicamentosa*.)

Melanoderma.—(See *Chloasma*.)

Melanosis Lenticularis Progressiva.—(See *Angioma pigmentosum et atrophicum*.)

Menstrual Exanthemata.—(See *Uterus in relation to Diseases of the Skin*.)

Mentagra.—(See *Sycosis*.)

Mercurial Eruptions.—(See *Dermatitis medicamentosa*.)

Miliaria (*mīl-ī-ā'-rī-ā*).—An affection of the skin in which there is an obstruction to the sweat secretion, with or without inflammation as a cause or consequence. The non-inflammatory form is called *sudamen*, or *miliaria crystallina*. The lesions are minute, clear, or pearly vesicles, closely crowded together, but never confluent, occurring usually on the trunk, especially on the neck, chest, and abdomen, though they may appear anywhere. They form rapidly, do not enlarge after the first few hours, get well in a few days, unless fresh crops appear, which may keep up the eruption for weeks.

The lesions are simply the result of the sweat being unable to escape, owing probably to an accumulation of epithelium at the orifice of the duct, when the sweat function is in abeyance, as in fevers; then when the secretion is restored, especially by a "critical sweating," the fluid, being unable to escape by a natural channel, is effused under the horny layer and forms a vesicle. (Crocker.) Robinson has made a careful and critical microscopic study of the lesions.

Miliaria vesiculosa, or *rubra*, says Crocker, has the same relation to sudamen (*M. crystallina*) as *acne vulgaris* has to comedo. Inflammation occurs in the gland as a consequence of retention of the sweat secretion, vesicles arise in great numbers upon the trunk, especially upon the back, but they may also come upon the face and limbs. The lesions are acuminate in form, whitish or yellowish in color, and situated on a raised red base (the "*miliaria rubra*" of authors). The vesicles run an acute course, drying up in a day or two and terminating in slight desquamation. The affection may come to an end in a day or two, or may last some time, depending upon the persistence of the cause, usually hot weather or excessive clothing. This is the *strophulus* or *red gum* of older writers, and is very common among infants, especially in summer. There is a good deal of prickling or itching as a general thing.

Miliaria papulosa is the affection formerly known as *Lichen tropicus*, or "prickly heat." It consists of minute red, acuminate, discrete papules closely crowded together with vesicles or vesico-pustules interspersed. It comes out suddenly over large areas and is accompanied by excessive sweating and intolerable prickling and tingling. It is said to differ from *M. vesiculosa* in that the inflammation produces the obstruction to the sweat secretion instead of *vice versa*, as in the former disease. It is essentially a tropical disease, though in a milder form often met with in our hot American summers.

Miliary fever, or "sweating sickness," is an epidemic febrile disease in which profuse sweating and miliaria are prominent symptoms. It was very fatal in the later middle ages, and an epidemic has been described as occurring in France so late as within the last few years.

Sudamina, or *M. crystallina*, occurs as a symptomatic eruption near the termination of fevers, such as typhus, typhoid, acute rheumatism, puerperal septicæmia, or in

tuberculosis. It is a symptom of depressed vital powers. The other two varieties are, as has been said, usually due to overheating and the induction of excessive sweating. In the tropical form it is said that one attack predisposes to others. The disease may run on into eczema.

The treatment of miliaria includes removal of the cause when this is possible, that is, keeping the patient cool and lightly clothed. Cool baths and saline diuretics are usually to be recommended. Vinegar and water, dilute lead water, black wash, or some soothing and astringent lotion, such as is recommended under eczema, may be employed. Solution of sulphate of copper, ten grains to the ounce, may also be employed. It is a favorite remedy, I understand, in Cuba and the West Indies. Astringent powders, as bismuth subnitrate, oxide of zinc or kaolin, are also useful. The camphor powder described under acute eczema will often relieve the prickling and burning. Ointments are out of place. In the severe forms of the tropical variety, I should think that tincture of belladonna in two-drop doses, or sulphate of atropia in $\frac{1}{200}$ -grain doses, pushed to its physiological effect, might prove useful. I have never had an opportunity to try this treatment, as the milder local measures mentioned always suffice in our climate.

Milium.—Milia are those small, rounded, whitish, pearly, non-inflammatory elevations which are situated in the skin, just beneath the epidermis, and which have their seat, for the most part, upon the face, although they may occur elsewhere upon the body. They may occur singly or in great numbers, and when formed may last for years without change. They give rise to no subjective sensations, and no annoyance beyond the slight disfigurement which they cause. The affection consists in an accumulation of sebum within the sebaceous gland, which, owing to the obliteration of the duct, is unable to escape. The treatment consists in opening each one of the little pearly

masses, squeezing out the cheesy, sebaceous matter which forms its contents, and, if there is any tendency to return, cauterizing the sac with a point of nitrate of silver or a drop of tincture of iodine.

Mole.—(See *Nævus pigmentosus*.)

Molluscum Contagiosum (*mōl-lūs'-kūm con-tag-ios-um*) is a disease of the skin, characterized by the appearance of rounded, semi-globular or wart-like papules or tubercles, of a whitish or pinkish color, varying in size from a pin-head to a pea. The lesion frequently looks like a drop of wax upon the skin, or like a pearl-button, flattened on top and with a darkish point in the centre, representing the aperture of a follicle. They usually occur on the face, especially the eyelids, cheeks, and chin. They are also met with on the neck, breast, and genitalia. They increase in size slowly or rapidly, and are usually without sign of inflammation, though inflammation may exist at times. They eventually terminate by disintegration and sloughing of the mass. They give rise to no pain, itching, or other inconvenience. The affection is now believed to be contagious.

Molluscum contagiosum is liable to be confounded with Molluscum fibrosum, but the two may be distinguished by their anatomical characters. In *M. contagiosum* the opening of the follicle can usually be seen as a blackish point at the apex of the tumor. The lesions are superficial and rise above the skin. They are mostly confined to the face. The tumors of *M. fibrosum* do not show the black follicular opening. They are also found in great numbers all over the body, and are not confined to one or two localities. From warts, which they sometimes resemble, the tumors of *M. contagiosum* must be distinguished by a careful comparison of structure.

Local treatment is alone required. Applications of ointment of white precipitate, or sulphur ointment, well rubbed

in, will sometimes suffice to remove the tumors. If this fails they may be opened with a small knife, the contents squeezed out and the bottom of the cavity cauterized with nitrate of silver. They may also be burned out with mild caustics, but severe measures should never be used, because the disease is slight and tends to get well spontaneously. Electrolysis has been recommended by Rohé and Hardaway. (See *Electricity in Skin Diseases*.)

Molluscum Fibrosum.—(See *Fibroma molluscum*.)

Monothrelix.—(See *Hair, Diseases of*.)

Morphœa (*mör-fê-â*).—An affection of the skin, characterized by the appearance of one or more patches of various size, roundish or ovoid in shape, on a level with the surrounding skin, smooth or slightly scaly, and giving a sensation of peculiar firmness to the touch.

The patches show two zones of coloration. The central part is usually of a grayish or yellowish-white color; it is separated from the healthy skin by a lilac-colored ring showing enlarged capillaries.

These patches are found on all parts of the body but are most commonly met with upon the neck, chest, abdomen, and limbs. They give rise to no pain, nor, in fact, any sensation, excepting occasionally some slight itching.

Morphœa is now regarded by most writers as a tropho-neurosis, and one of the earlier stages of scleroderma. Some few writers, however, consider it an independent disease. (See *Scleroderma*.)

Morvan's Disease.—A peculiar nervous affection similar to, if not identical with, syringomyelitis. The first symptom is pain in the extremities, followed by analgesia first of one side, then of the other, and then the occurrence of panaris in one or several fingers, which may or may not be painful. Fissures, ulcers, and eczema-form eruptions likewise occur, with occasionally ulcers resembling perforating ulcer of the foot. Necrosis of the fingers may follow.

Various other trophic lesions show themselves in the course of the long years through which the disease develops.

Morvan's disease is in its essence an inflammatory affection of the gray matter of the spinal cord, and is of interest from a dermatological point of view chiefly because it is liable to be confounded with leprosy and scleroderma. The persistence of tactile sensation, and the abolition of heat and pain-sensation, are considered pathognomonic. The affection must be carefully studied in each case, and I must admit that in the only case I have seen, which was a native of India, shown me by my friend, Dr. Morris J. Lewis, I failed to make a perfectly satisfactory diagnosis between syringomyelitis and leprosy, nor do I think such diagnosis possible without prolonged observation.*

Mother's Mark.—(See *Angioma*.)

Mycetoma.—(See *Fungus Foot*.)

Mycosis, or Mycosis Fungoides (*mī-cō'-sīs-fūng-gōyd'-ēs*) is a disease of the skin characterized by the appearance of soft, red, mammillated tumors, which may go on to the formation of fungous ulcers of unhealthy appearance. Anatomically the tumors show a development of lymphatic globules (small cell infiltration) and a reticulum analogous to that of lymphatic glands, whence the name, "lymphadénie cutanée," proposed by some French authors.

The symptoms characteristic of mycosis are variable at different periods of the disease. At first, bright-red erythematous patches on a level with the skin, or slightly raised above the general surface, appear at one or more points, accompanied by pruritus. These occasionally resemble the lesions of urticaria—in fact, urticarial patches have been observed in some cases. Later the lesions

* See, for details of the affection, Charcot, *Progrès Méd.*, Mar., 1890. Also Crocker, *Dis. Skin*, 2d ed., p. 472.

become covered with scales, or vesicles and papules, or may become raised, hard, and fissured, assuming somewhat the appearance of chronic, infiltrated eczema papulosum ("lichen"). At other times they may diminish and disappear like eczema, without leaving a trace. This peculiarity led Hardy to give his earlier cases the name of "lichen hypertrophicus." While these erythematous or lichenoid lesions mark the earlier stage of the affection, sooner or later, after months, or perhaps years, it takes on the more especial features which give mycosis its peculiar and characteristic aspect. On, or alongside of, the lichenoid patches, vegetations and growths occur, at first wart-like, later profusely hypertrophic—frambœsioid lesions. Once formed, these lesions increase rapidly in size, and they may attain the dimensions of a cherry-stone, an almond, or a small orange. They are red, sometimes violaceous, vascular, somewhat firm, of uneven surface, so as sometimes to resemble tomatoes. The growths may be solitary or grouped and united at the base, but separated at the summit.

The surface of the hypertrophied tumors is at first dry, smooth, and sometimes slightly scaly. The pruritus, a marked symptom of the early lesions, diminishes at this stage, and there may be even a slight diminution of sensibility, and any hairs which may grow from the surface are apt to fall out.

After continuing in this state for a considerable time the tumors may suddenly change in one of two quite diverse directions. Either they may, as some do, undergo rapid interstitial absorption, become retracted, shrivel up and disappear, without leaving any trace, in ten to twenty days, or, on the other hand, they may become moist and crusted, or break down and suppurate profusely, with an ichorous discharge. Now and then the body of the tumor remains firm, while a crater-like cavity forms in its centre, and in rare cases the new growth, followed by destructive metamor-

phosis, may go beyond the skin and penetrate the subjacent tissues to the very bone.

Simultaneously with the development of the skin lesions the lymphatic glands, especially those in the axillæ, groins,



FIG. 54.—MYCOSIS FUNGOIDES.*

and cervical regions, increase in size and become painful. While these glands may attain a considerable size, they rarely suppurate.

* *Ann. de Derm. et de Syph.* Entered then as "Adenoma fongoide."

In the earlier stages of the disease patients usually preserve their health to a fair degree, but when the tumors multiply rapidly, and especially when they begin to suppurate, the general health fails ; indigestion, diarrhœa, and marasmus supervene.

Mycosis may invade any and every portion of the integument, but the lesions are more frequently observed on the trunk, and on the proximal and inner portions of the limbs, than on the face and extremities.

Mycosis is an essentially chronic disease, taking usually years to run its course of erythematous and papular development, retrogression, relapse, hypertrophy, ulceration, etc. Exceptions occur, and the hypertrophic and rapidly ulcerating lesions may form the first stage in its development.

The disease usually terminates fatally, and even in those cases in which a return to health has been observed, the patients do not seem to have been kept under observation long enough to make it certain that a permanent cure had been obtained. Ordinarily the patient succumbs to some accidental complication, or to cachexia, or more frequently with the symptoms of leucocythæmia.

Only one form of treatment has been recommended with any hope of success : the administration of arsenic, in full doses, by the mouth or hypodermically.*

Myoma of the Skin.—Myomata, or dermatomyomata, are small tumors occurring either single or multiple. (Brocq, *l. c.*) One variety, the more common, is solitary or grouped in a single locality. The lesions are cherry to apple sized, and may be sessile or pedunculated. Their usual seat is upon the breasts and genitalia in both men and women.

They are contractile, vascular, of slow growth, and

* See J. F. Payne, *Trans. Pathological Society* (Pictures and References), 1886, p. 522.

usually indolent, although at times they are found to cause much pain. The tumors are usually composed of smooth muscular fibres, but may contain considerable fibrous tissue, in which case they are known as *fibromyomata*. Sometimes the vascular element predominates, and at other times the lymphatic, so that, at times, the exact character of a given tumor may be very doubtful.

Simple or generalized myomata constitute an exceedingly rare affection. They are characterized by minute tumors the size of a lentil, more or less, of slow development, roundish or oval, of a pale rose or deep red color, according to their size, and disseminated here and there over the trunk or limbs. Their peculiarity is that they are tender and painful, often to a high degree, the pain often occurring in paroxysms of extreme intensity. They are composed of unstriated muscular tissue, and are, I suppose, closely related to Duhring's "Painful subcutaneous tubercle." * The treatment is ablation by knife, caustic, or electrolysis.

Nævus.—(See *Angioma*.)

Nævus Pigmentosus (*nē'-vus pig-mēn-tō'-sūs*, Mole).—There are two varieties of pigmentary nævus, the hypertrophic and the flat. The usual seats of these growths is upon the face, the neck, the chest, the back of the hand, and the shoulders. Moles vary in color from the natural shade of the skin to dark brown or black. They are usually very small, from pin-head to small-pea size, but they may at times cover considerable areas of the surface. They may be quite smooth or covered with fine or coarse hair. Hairs are more apt to be met with in hypertrophic pigmentary nævi.

Sometimes pigmentary nævi approach the color of vascular nævi on account of the numerous enlarged blood-vessels which they contain. The boundary line between the two is not accurately defined.†

* See Duhring's "Treatise on Diseases of the Skin," 3d ed.

† Filandeau, *Thèse de Paris*, 1893.

Moles are extremely common. There is scarcely any one who has not one or more in some part of the person. It is only when they occupy a conspicuous position, however, that the physician is called upon to treat moles, unless in cases where they are of such size or so inconveniently placed that their removal is desirable for convenience sake.

Moles are more frequently found on the insane and in persons who suffer from some hereditary taint.

The larger pigmentary *nævi* present very often curious



FIG. 55.—*NÆVUS PIGMENTOSUS.*

shapes and sizes. Sometimes the resemblance is to a large hairy caterpillar, a scarf about the neck and shoulders, a pair of hairy swimming drawers.* Some allusion has been

* These singular shapes certainly lend some support to the generally entertained notion of maternal influence, though I should not be inclined to place confidence in the interpretation sometimes given to these appearances. For instance, St. Hilaire gives the case of a little girl born during the French Revolution, who carried upon her left breast a liberty cap. Such cases would be more to the point if some prediction pointing out the sort of mother's mark likely to appear could be made in a series of instances before the birth of the child.

made to these hairy moles under Hypertrichosis. In fact, the pigmentary nævus tends to run into angioma on one hand, and hypertrichosis on the other.

Occasionally nævus pigmentosus tends to epitheliomatous degeneration. The occurrence is not common, but

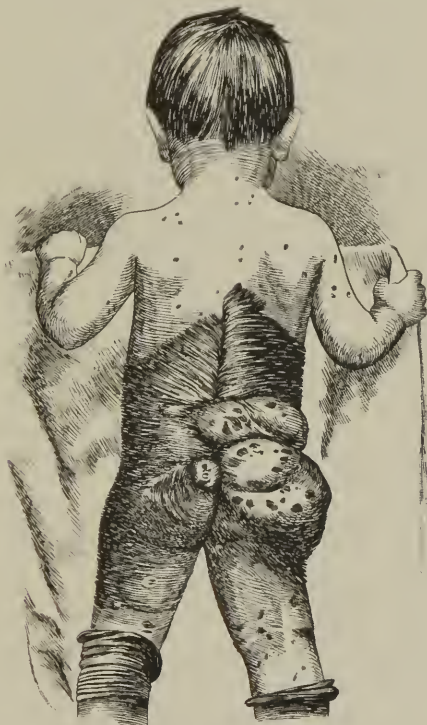


FIG. 56.—NÆVUS LIPOMATODES.

Renoul* has reported 34 cases. It is the hypertrophic form usually which takes on epitheliomatous degeneration, but I think the fact that this may occur at all justifies the removal of such tumors when so situated as to be liable to

* *Thèse de Paris*, 1891.

irritation or when the slightest sign of change of structure shows itself.

The smaller moles may be destroyed by applications of nitric acid or caustic potassa, the latter to be used with great caution, if the solid stick is employed, because of its tendency to spread in the surrounding tissues. A scar may be expected in all but the most superficial pigmentary nævi after any operation.

When there are hairs implanted in the nævus, electrolysis applied to these is the preferable method; while the hairs are being destroyed the mole is likewise being removed, and often may be nearly or entirely obliterated by this procedure. In larger nævi operation with the knife may be required. (For further remarks on pigmentary nævi, see article on *Hypertrichosis*.)

Nævus keratosis partakes partly of the character of nævus and partly that of congenital wart. It is usually seen in the form of a warty patch on one part or another of the body, often at the juncture of the segments. At other times it follows the lines of the nerves.* The treatment is that of verucca (*q. v.*) or of *N. pigmentosus*.

Nævus Pilosus.—This is a hairy mole, such as is often seen upon the face and elsewhere. (For treatment, see *Nævus pigmentosus* and *Hypertrichosis*.)

Nails, Diseases of.—(See also *Eczema*, *Psoriasis*, and *Syphilis*.) Under this head are to be considered only those affections which involve the horny substance of the nail itself, and which, in almost every instance, proceed from some influence exerted upon the matrix. The affections known as *onychia* and *paronychia*, affecting the nail plate only secondarily, will be found described under their respective heads.

Hypertrophy of the Nail may include an increase in the number of the nails, or in the substance of one or more in-

* See Rousseau, Du Nævus Keratosique, *Thèse de Paris*, 1891.

dividual nails. Instances of the former are observed as an anomaly, and comprise the occurrence of nails on the last phalanx of supernumerary fingers and toes, the presence of double nails on one finger or toe, or the occurrence of completely or imperfectly developed nails at unusual points, as on the end of the first phalanx after an amputation, on a meta-carpal stump, etc., or as a malformation in the region of the scapula.

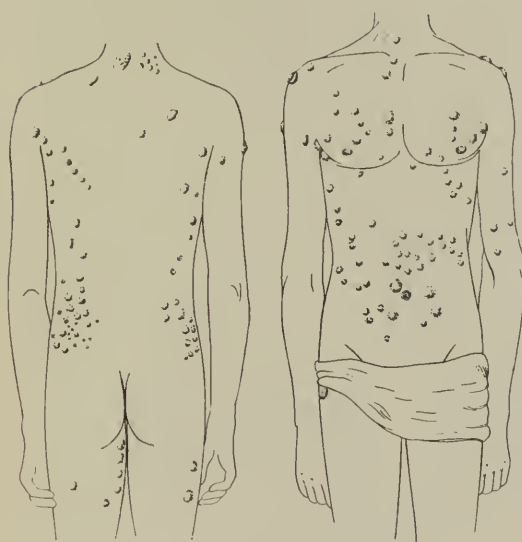


FIG. 57.—NÆVUS PILOSUS.



FIG. 58.—NÆVUS PILOSUS.
(After Schwimmer.)

The figures *k n* represent small, hairy moles. *g* represents a more angiomatous condition.

Increase in the substance of the nail may take place simply as a thickening, or as a general enlargement of the whole substance of the nail. Both are known as *onychauxis*.

In the first form the nail is unshapely, thick, opaque, glossy on the surface, or spherically curved, and of a grayish-white color, has a massive feel, is heavy, and so hard that it can only be cut by a saw. When the change affects the whole nail it often shows, at its free border, a tendency to curve downward. In the second form of hypertrophy, should

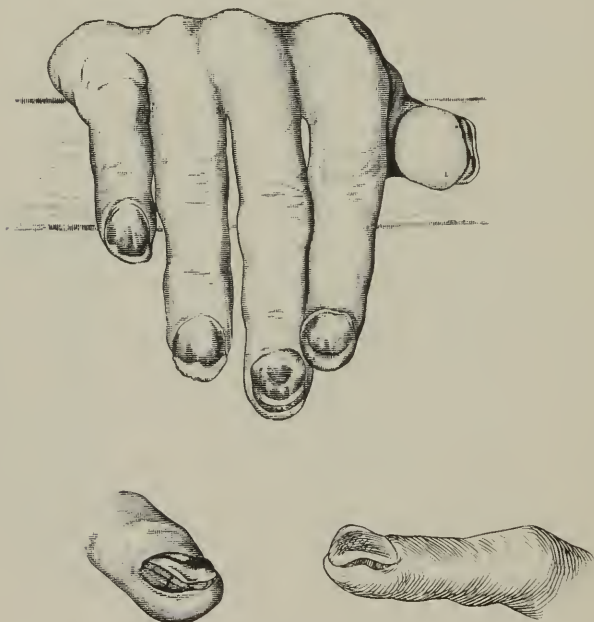


FIG. 59.—HYPERTROPHY OF NAIL.

the nail increase in a lateral direction, the effect is felt in the soft parts; should it increase longitudinally, it may grow several inches in length, curving and twisting grotesquely, and forming the deformity known as *onychogryphosis*. Onychogryphotic nails have a dirty yellow, brownish, or grayish color, with a shining lustre, and are marked with longitudinal and also transverse ribs, with occasional

horny plates. The under surface is usually brownish, with an irregular, flaky exterior interrupted by smaller or larger cavities, and crossed here and there by transverse ridge-like projections. The anterior portion of the matrix, and the entire area of the nail-bed, are shown by microscopical examination to be in a chronic state of irritation.

Onychauxis may be congenital or acquired. At birth the nail may be only slightly developed in excess of its normal average, but it grows with a greater relative rapidity. The various diseases associated with papillary hypertrophy (*e. g.*, ichthyosis) seem to favor the development of this inborn tendency in the nail. More commonly onychauxis is acquired and may be traced to some traumatic cause—to neglect, to the extension of morbid inflammatory processes of the corium and the connective tissue of the cutis to the matrix of the nail (*e. g.*, psoriasis, chronic eczema, lichen ruber, lepra Græcorum, elephantiasis Arabum, etc.). Some predisposition to onychauxis must, however, exist in these cases, as not every case of these diseases shows hypertrophy of the nail (some even show atrophy), and as, furthermore, the nails are, at times, affected when the skin disease does not exist in contiguous parts.

Symptomatic hypertrophy of the nails sometimes occurs in neuropathic affections of a degenerative or irritative character, most frequently in spontaneous neuritis, neuralgia, chronic myelitis, traumatic lesions of mixed nerve trunks ("glossy skin"), etc. The same alteration of the nails may occur after various chronic diseases, as articular rheumatism, affections of the bones, or ankylosis.* Partial hypertrophy may occur after various ulcerative processes in the nail bed, in which the remaining part of the matrix appears to attempt to make up the loss.

* Friedrich, *Virchow Archiv*, 1868, vol. ii, p. 332, gives a case connected with general enlargement of the bones.

The effect of hypertrophy of the nails is not only cosmetic deformity, but absolute loss of tactile sense to a greater or less degree. The person is unable to execute delicate or fine work. Fortunately, onychogryphosis of the fingers is rare, and even onychia to a marked degree is uncommon. When the toes are affected, walking may be more or less interfered with, and in advanced cases may become altogether impossible. Lateral hypertrophy may produce inflammation and ulceration in the surrounding soft tissues (ingrown toe nail).

The prognosis in hypertrophy of the nail depends upon the chance of removing the cause. Of course, the hypertrophied nail can in no wise be altered, but if the eczema, psoriasis, etc., can be cured, there is good reason to hope that a healthy nail may be developed from the matrix. In the case of such diseases as lepra or elephantiasis, where the disease is incurable, but little hope can be entertained of improving the state of the nail. The same is true when the matrix has been altered by traumatic influences to an irremediable extent.

The treatment consists in removing the cause when attainable, and in doing away with the hypertrophied product when this becomes a serious annoyance. The nail may be removed by means of the knife, cutting pliers, or, in extreme cases, the saw. Where the nail has enlarged in width, it may press upon the lateral furrow to a greater or less extent, and when to this is added pressure from a tight shoe, considerable irritation and inflammation of the soft parts may ensue, followed in extreme cases by great destruction of the neighboring tissues, even involving the tendons and bone.

With regard to the treatment by removal of the cause, if eczema, psoriasis, or other disease exists, this must be removed by appropriate local remedies, ointments, rubber finger stalls, etc. When eczema is present on the body,

iron, arsenic, and other remedies appropriate to these affections of the skin will also be found to affect the nails favorably. When the disease of the matrix and the nail bed is due to any form of syphilis, internal treatment appropriate to that disease is called for, and, in addition, the local application of powdered iodoform, mercurial ointment, or solution of corrosive sublimate, 1 to 250 of water.

When the cause is traumatic, as from an ill-fitting shoe, this should be remedied, or when from severe occupation, protection of the finger or toe by soft wax or other mechanical device.

Atrophy of the Nail, like hypertrophy, may be congenital or acquired. The congenital form is met with in connection with imperfectly developed fingers and toes, the nail being either entirely absent, imperfectly developed, mutilated, or coalescing with other nails.

The acquired form of atrophy of the nail is met with as a result of traumatic influence, as pressure of shoes, etc. which at times may produce hypertrophy, and at other times atrophy. The nail formation may also be hindered by a knock, blow, pinching, etc. Geber looks upon white spots on the nails as a sign of insufficient cornification of the nail cells, traceable to mechanical influences.

Thermic and chemical sources of irritation are not uncommon causes of atrophy of the nail, as are also inflammations associated with suppuration and ulcerative processes.

Among the constitutional causes of retarded nail growth are febrile conditions and chronic wasting conditions of the general organism. Typhoid fever on the one hand, and tuberculosis on the other, may be mentioned as typical causes. Those cutaneous diseases and nervous affections which produce hyperplasia of the nails, such as ichthyosis or ataxia, may, under other conditions, give rise to precisely the opposite effect.

The imperfectly developed nail is whitish-gray, lustreless, thin, and delicate, giving the impression of a thickened membrane; possessing but slight hardness, readily broken and flexible. At times the substance is so friable that it exfoliates longitudinally and fractures through its thickness, thereby rendering the nail uneven.

The treatment includes, first, frequent trimming and covering of the affected nail with a protective layer of wax. The removal of the etiological factor is next to be attended to. The main point is to keep away any possible injurious influences, to cure, if possible, any accompanying skin diseases, dyscrasic or nervous affections, inflammations and ulcerative processes, and to support the strength of the patient when impaired nutrition may be the cause. When the defective nail formation is due to some incurable disease, it is, of course, impossible to expect a change for the better. Geber thinks that equable pressure exerted by strips of adhesive plaster upon a wax nail fastened to the nail bed will hasten the regeneration of the nail.

Deformity of the Nail.—Deviation in form, degeneration, or discoloration of the nail, are all deformities of the nail as distinguished from simple hypertrophy, and are due to various causes.

Malformation of the nail plate is a result of disturbed function of the matrix. The latter may be the result of nerve disturbance (paralysis), of injury, malformation of the lateral furrow, inflammation of the underlying connective tissue, periosteum, bone, etc.

Nails suffering from deformity may be long, short, narrowed, or curved one way or another, occasionally pointed. I have reported a case where the nails were curved or rolled in at the edges so as to present a semi-cylindrical figure, and so shrunken that they occupied only about one-half the normal width of the nail bed. The case was that of an infant suffering from hereditary syphilis. The

deformed nails were gradually replaced by normal ones as the infant regained health under treatment.

Sometimes deformity of the nails may be hereditary. As the cause can rarely be removed, the affection is usually irremediable. Fortunately, it is rarely more than a mere disfigurement.

Degeneration of the Nail may occur as a result of faulty nutrition, but is also met with following chronic inflammatory processes (paronychia sicca) of the matrix. The nail may be thick or thin, or more frequently fibrous, and spread with an irregular detachment of particles. The color changes to a grayish-white or dirty yellowish-gray. Aside from disfigurement, these nails are very troublesome, as they are continually breaking and splitting, and occasionally denude the nail bed. Removal of the cause, when this can be ascertained, and protection by the wax nail-covering and bandage, may be recommended when practicable.

Separation of the Nail Plate occasionally takes place in one or more nails: a grayish strip of coloration appears along each side of the nail and gradually spreads toward the median line until the whole nail plate is invaded. This is then seen to be raised above the surface of the sub-ungual structures, remaining united to the matrix only at its edges and root.

The nail plate thus elevated above the underlying structures may be moved about slightly without causing pain. It grows as usual, and its structure remains unchanged excepting as to its ashen-gray color. Occasionally, white achromic patches are seen scattered over the surface.*

Such cases are very rare. Bazin considers them due to eczema. One case under his care was cured by applications of tincture of iodine.

*Durand, *Jour. de Med. de Bordeaux*, Dec. 9, 1888.

Discoloration of the Nail is only worthy of a passing notice. The changes to purple, to chalky-white, to yellow, etc., in various diseases, are probably due only to the translucency of the nail, showing the congestion or discoloration of the tissues beneath.

Traumatic and chemical injuries may affect the texture of the nail from a distance. Thus, workers in acids, etc., and those who use peculiar tools, may have alterations in the nail following long-continued action at a distance. The animal and vegetable parasites may also affect the texture of the nail.

Parasitic Diseases of the Nail.—The itch insect, "*sarcoptes scabiei*," may give rise to various changes in the nail. Boeck states that the eggs and excrement of the sarcoptes are to be found in the degenerated nail substance. Bergh has shown that the deviations in the nail due to the sarcoptes are brought about on the one hand by affection of the nail bed and matrix, and on the other by implication of the nail substance.

The collective result of these influences is that the nail bed becomes thereby hypertrophic and greatly bulged out longitudinally in the middle. The lower surface of the nail itself is studded all over with irregular projections and hollows, often even deeply excavated or conically depressed. The nails assume a horny or claw-like appearance, and are considerably thickened, yellowish or brownish in color, and on section show an asbestos-like, whitish or yellowish, flaky or fibrous, appearance. On microscopic examination Bergh found itch mites, eggs, egg shells, burrows, skins, and excrement of the parasites in the substance of the nail. The writer has never observed scabies of the nail, and is inclined to think that the disease does not exist among our more cleanly population.

Various tropical flies, which lay their eggs under the nails, may cause disease, but none of these is so harmful as

the sand-flea (*Pulex penetrans*), which causes at first violent pain and, following this, paronychia.

Vegetable parasitic diseases of the nails are less uncommon than those caused by animal parasites. The disease is more apt to spread from the adjacent skin than it is to be implanted directly under the nail. The onychomycoses are, so far as yet known, of only two kinds, that due to favus, and trichophytosis. The clinical appearance is not very different, and will be described once for both. Favus is the more rare. The nail affected shows signs of change at an early date after the implantation of the fungus, becoming brittle, frayed out, and intersected by furrows, and presenting a discolored, opaque, grayish or yellowish-white appearance, and is more or less lifted up. When the process has continued for a considerable time the alteration extends to the entire nail, and the matrix being implicated, changes in growth are perceptible. The nail becomes claw-like, thickened, flakes off even on the surface, and being detached here and there, and acquiring a faded, dirty yellow color, becomes exceedingly disfiguring. Rare cases of favus infiltration of the nail show the peculiar sulphur-yellow crusts or scutulate depressions; but the worm-eaten appearance produced by numerous other affections must not be mistaken for this, and, in fact, apart from the actual discovery of the fungus, an exact diagnosis cannot often be made. In this country parasitic disease of the nail is excessively rare.

Longitudinal or transverse sections through a nail changed by the infiltration of fungus show disintegration of the substance, and by treatment with glycerine, convoluted threads of mycelium and conidia mixed with cornified epithelium can be observed under the microscope.

The treatment consists in scraping the nail very thin and applying a parasiticide. Strong acetic acid is the best, as it softens and penetrates the horny tissues.

Neoplasm, Inflammatory Fungoid.—(See *Sarcoma* and *Mycosis fungoides*.)

Nettle Rash.—(See *Urticaria*.)

Neuralgia of the Skin.—(See *Dermatalgia*.)

Neuroma Cutis is a rare affection, characterized by the presence of variously-sized and shaped nerve growths, having their seat primarily in the true skin. The lesions are visible to the eye as split-pea-sized tubercles, scattered, or aggregated in large numbers over the affected locality. The lesions are of a rose or pink color, smooth and firm, and the intervening skin normal. Pain, of a paroxysmal character, and extremely severe, is the chief symptom. Movement of the affected part, a draught of cold air, or even mental worry and excitement are often sufficient to cause pain and even agony.

A microscopic examination of the tumors in the few cases observed has shown them to be composed of medullated nerve fibres and connective tissue in varying proportions, and in one case of smooth muscular fibres also. They were, in fact, actually fibromata, at least in the case of the older lesions. (See *Fibroma molluscum*.)

The affection must be distinguished from painful subcutaneous tubercle, a not uncommon affection. Here the lesion is usually single, and is not situated in the skin, but in the subcutaneous tissue.

The only treatment of neuroma cutis is the excision of a portion of the nerve trunk leading to the affected area. This has given entire relief in one case, while in another case the same operation failed entirely.

Neurotic Excoriations.—Under this title the late Sir Erasmus Wilson described a peculiar affection of the skin, characterized as follows:—"Hyperæmia, with induration, in small oval or quadrangular spots of about a quarter of an inch in diameter; a sense of fullness, burning, tingling, pricking, and itching; sometimes a vesication correspond-

ing with the diameter of the congested spot and very slightly raised; sometimes an excoriation produced by rubbing or scratching; more or less hemorrhage, followed by a black crust; on healing, a pigmentary stain; usually pigmentation of the entire skin to a greater or less extent; and accompanying these symptoms a state of general nerve disorder sometimes assuming the character of hysteria." In one case a lady, aged forty-seven, had the face spotted with small abrasions, oval or polyhedral in contour, for the most part square or oblong, and sometimes pointed toward the inferior margin. They were about one-fourth of an inch in diameter, and were fifteen or twenty in number, in various stages of advance and decline, scattered over the forehead and face. The patient's attention was first directed to their existence by a sensation of fullness, burning, and tingling, continuing for some hours, until relief was sought by rubbing or scratching. The effort of a very slight rub was to detach the cuticle, which seemed to slide off the spot, leaving an excoriated patch, which sometimes bled to a greater or less degree.

The pathological history of the affection was that of a hyperæmia giving rise to a flat, circumscribed induration, accompanied by slight redness, and with the sensation of fullness, burning and tingling, and then a slight serous exudation appeared beneath the horny epidermis, sufficient to loosen the cuticle, but rarely sufficient to develop a blister; these several processes occupying only a few hours in their progress. Pigmentation was the final result. In the case above given the process had been going on for nearly two years.

In another case given by Wilson, that of a young lady, aged twenty, of markedly neurotic character and in a debilitated condition, a somewhat similar eruption broke out about the mouth after eating ice. She then, by accident,

bruised her nose, and a second attack of the disorder showed itself on and around the injured organ; a third attack became developed on the forehead, as the consequence of a draught of cold air. The skin became swarthy and



FIG. 60.—NEUROTIC EXCORIATION OR SO-CALLED "ERYTHEMA GANGRENOSUM." (After Doutreypont.)

pigmented. With reference to the spots, the patient observed that they developed with a feeling of fullness, burning, tingling, pricking, and itching; if left to themselves they frequently gave rise to a small blister, but the excessive pruritus usually caused her to rub or

scratch them until the blood flowed, when relief would be obtained.

The face, in Wilson's experience, is the part most usually attacked, but it appears occasionally as a general affection. Wilson has seen a well-marked example restricted to the forearm, and especially to the district supplied by the ulnar nerve. When it occurs as a general affection it is apt to be mistaken for prurigo (pruritus?). Wilson likewise considers some cases of the affection to approximate to hæmatidrosis.

Since the affection usually occurs in highly nervous, anæmic, and sometimes hysterical females, the question as to their being factitious comes up for consideration. Wilson himself has little or no doubt as to the natural character of the lesions presented, but some other dermatologists consider them as artificially produced. It is certain that eruptions so closely analogous as to render their distinctive points difficult to bring out in a written description have been shown to be factitious. (See *Feigned Eruptions*.)

Again, some of the cases described by Wilson resemble in various points dermatitis herpetiformis. The stress which he lays upon the severe itching as a constant symptom, and the herpetiform character of the lesions in some cases, suggest this view. At present, however, Wilson's description and name are best preserved.

Nipple, Eczema of.—(See *Eczema*. See, also, *Dermatitis malignant papillary*.)

Nits.—The ova of the *Pediculus capillitii* and of the *P. pubis*. (See *Pediculosis*.)

Nodose Hair.—(See *Hair, Diseases of*.)

Noli-me Tangere.—(An old name for *Lupus vulgaris*.)

Odor of the Human Body.—(See *Bromidrosis*.)

Œdema of the Skin.*—There are four varieties of œdema of the skin: 1. *Acute circumscribed œdema*. 2. *Solid œdema*,

* This article is largely taken from Brocq (*l.c.*).

localized in a single limb or part of the body. In this class might be included *Trophic œdema* and *Blue œdema of hysterical persons* (see *Trophoneuroses*). 3. *Myxœdema*. 4. *Edema of newborn infants*.

Acute Circumscribed Edema of the Skin.—This affection is characterized by the sudden appearance, following malaise and slight gastric disturbance, of localized infiltrations of the subcutaneous cellular tissue of the skin and some portions of the mucous membrane. These infiltrations are isolated with defined borders, rose color or bright red, smooth, and shining at the border and rising considerably above the general surface. In size the lesions vary from that of a silver dollar to that of the palm of the hand and larger. They sometimes give rise to a slight feeling of tension, but never occasion pain or severe pruritus. They may occur anywhere, but are chiefly found upon the face and genitalia.

The lesions of acute circumscribed œdema reach their full development quickly, last a variable period, from a few hours to a day or two, and then rapidly disappear. As one lesion passes away another appears, and so on.

The affection may show itself upon the mucous membranes of the conjunctiva, the pharynx, and even the larynx, causing in the latter case severe attacks of suffocation. This form of œdema is characterized by a prolonged course involving acute attacks with intervals of immunity.

A somewhat similar affection is that described as pseudo phlegmonous œdema, in which attacks of intense pain occur at points which soon after show a more or less extensive swelling of the skin accompanied by redness and local elevation of temperature.

The diagnosis of this form of œdema must be made in connection with the possibility of *non-erythematous nodosities* (cf. Brocq), *ephemeral arthritic œdema*, *œdema perstans* being present. It also resembles the so-called *giant urti-*

caria, described some years ago by Milton, with which it holds some relation.*

Acute circumscribed œdema of the skin, being in all probability a vaso-motor disturbance, such drugs as quinine, ergotine, belladonna, digitalis, hamamelis, and perhaps salicylate of sodium, are indicated. (See also *Urticaria*.)

Solid Œdema, Localized in a Single Limb or Part of the Body.—In certain persons who have suffered from phlebitis, lymphangitis, or adenitis, or sometimes without any appreciable cause, the limb is observed to become œdematous and swollen, and to increase little by little in size, while not presenting any symptom of inflammation. The surface in these cases remains smooth, white, and shining, thus differentiating the affection from true elephantiasis. At first there is no pitting upon pressure; later the tissues become more elastic; there is no pain. The solid elastic œdema of the eyelids and of the upper lip occurring in scrofulous persons, particularly in those suffering from diseases of the nasal fossæ, are to be included here.

The treatment consists in ascertaining and, if possible, suppressing the cause of the pressure in veins and lymphatics leading from the affected localities, and in addition the employment of graduated elastic pressure. Strychnia and ergot may be employed internally.

Myxœdema.—The symptoms of this affection consist, first, in a hardening of the integuments of the face, which become thick, dry, and rugous, and later on a waxy, porcelain-like, or slightly yellowish appearance at all points excepting the upper maxillary prominences, which retain their natural color. The hairs fall out, the sebaceous and sudoral secretions are suppressed, and a furfuraceous exfoliation not unfrequently supervenes. The face is bloated

* See Hartzel (Sajous' *Annual Univ. Med. Sci.*, vol. iv, 1891, A—28).

and looks like a full moon (Gull), the eyelids are puffy, the chaps are fallen, the nose swollen and flattened, the lips are enormously enlarged and everted, and all the features out of shape and deformed. The patient presents the appearance of profound hebitude.

The buccal, gingival, palatine, and pharyngeal mucous membranes may be involved and become swollen, and sometimes fungating. The entire body becomes changed in appearance, the neck, hands, feet, etc., take on an almost elephantiastic aspect. There is no pitting upon pressure with the finger.

Later various symptoms supervene, which point to a profound alteration in the nutrition. There is nervous prostration; the patient's movements are all made slowly and with difficulty in a highly characteristic manner. Speech is slow and difficult. The intellectual faculties seem to be impaired and there is no vivacity. General and special sensations are impaired. The appetite is diminished and digestion is difficult; the temperature is below the normal and the patient always feels cold. The prognosis is generally unfavorable.

The causes of myxœdema are still obscure. It is common among women. In some cases it follows upon violent moral shocks. The most important point, however, is that similar symptoms are observed in persons who have suffered ablation of the thyroid gland. This has led to the successful treatment of some cases by implanting pieces of sheep's thyroid gland under the skin, or in some cases into the abdominal cavity.*

Edema of New-born Infants.—Œdema of new-born infants was formerly confounded with sclerema, but Parrot has shown that the affections are distinct. The affection

* (See Sajous' *Annual of the Medical Sciences*, vol. iv, 1890, H—8; vol. iv, 1891, H—11; vol. iv, 1892, H—12.)

is generally observed at or within a day or two of birth, and not unfrequently in infants born before term. The œdema is usually observed upon the calves, posterior portion of the thighs, the hands, and the genital organs. The affected parts are pale and pit upon pressure.

Usually this is the extent of the disease, but at times it is more severe, the skin becomes livid, and a firm, hard œdema may invade the entire body and limbs. Respiration becomes difficult and the patient succumbs with suffocation and coma, or with some pulmonary complication.

In lighter cases, tending to a favorable termination, the œdema gradually disappears and recovery takes place after some days. (For a full account of the disease see an excellent article by Depaul, *Dictionnaire Encyclopædique*.)

The therapeutic indications are : 1. To render the action of the heart more vigorous. Hygiene, good food, a small quantity of some stimulant, particularly wine, may be employed. 2. To favor the dispersion of the effused fluid by re-establishing the functions of the skin. Friction, massage with warm flannel or the warm hand, aided by warm oil, spirits of camphor, etc. Friction and malaxation in the direction of the venous current is advisable. The vapor of benzoin is sometimes employed. 3. Warmth. The infant should be placed in a "couveuse" or "incubator," or given hot baths, wrapped in hot flannels, etc.

Ointment.—Under this designation are usually included all those substances of a fatty consistency, whether composed of fat or not, which are employed in medicine as a coating to the diseased integument or as a means of introducing medicinal substances into the economy by way of the skin.

The softer preparations are sometimes called pomades, while those of a firmer consistency are known as cerates; but the various forms are usually included under the middle term, "ointment."

Ointments usually contain lard as a basis, but marrow, suet, and mixtures of oils with paraffin or wax, are often employed. Some years ago the preparations known as cosmoline and vaseline, derivatives of coal-tar, were introduced into use as bases for ointments, and they have found their way into general employment, and are at present designated by the expression *petrolatum* in the U. S. Pharmacopœia. More recently lanolin, derived from the wool of sheep, in which the fatty acids are found in combination with cholesterin instead of glycerin, as is the case with the fats and oils in ordinary use, has been made official.

Under the general designation of ointments may also be included certain pastes or similar mixtures of an ointment-like consistence and made up of kaolin and linseed oil, etc.

Ointments are employed with three principal objects: 1. To cover and protect abraded and inflamed areas; 2, to act as stimulants to the cutaneous surface; 3, as a means of conveying medicine to the skin or to the general economy. To meet the first indication it is requisite that the base of the ointment should itself be bland and unirritating. Hence, if fats are employed, these should be carefully selected and should be carefully preserved from decomposition. In many cases fats of any kind are badly borne by the skin, and here the *petrolatum* base may often be made use of alone or in combination with starch. The stimulant effect of ointments is obtained by the addition of some ingredient, vegetable or mineral, of which this effect is desired. Most compound ointments belong to this class, and the skill and conscience of the pharmacist are tried to the utmost in their preparation. When a superficial effect is desired, any ointment base will be sufficient, but where the medicinal influence is to penetrate deeper, the choice of a base is a matter of some importance. After a very extensive experience with all the bases hitherto brought forward, including those whose "penetrative" qualities

have been most loudly trumpeted, I am of opinion that the true fats, of which lard is an example, are best calculated to carry medicinal substances into the system.

The systemic effects of medicines introduced through the skin by means of ointments is decided only in a few cases, of which mercury is a conspicuous example. Belladonna and other drugs also act vigorously in immediate proximity to the place of inunction, but with somewhat less intensity upon the system at large. In this use of ointments, even more than in their employment with the view to their local effect, the base of the ointment is by no means a matter of indifference. The kaolin pastes have little or no penetrative power, vaseline a less decided value in this respect than lard, and the latter, it is said, less than lanolin. With regard to this point I have just stated my own opinion, but it must be said that the views of various observers differ. Fox and Blanc think that lanolin is more readily absorbed by the skin than any other fatty substance and is useful as a basis for ointments when an effect upon the deeper skin or upon the whole system is desired. On the other hand, Ritter, as the result of a series of careful experiments, cannot admit that lanolin has any advantage over other ointments in facilitating the passage of chemical matters through the skin.

Onychauxis.—(See *Nails, Diseases of*.)

Onychia (*ön-ik'-i-ă*).—(See *Nails, Diseases of*.) Inflammation of the matrix of the nail, usually followed by falling of the nail itself. One form of the disease is characterized by the formation of herpetic vesicles under the nail, with extreme neuralgic pain. The nail may or may not be thrown off in this form of the disease. Sometimes the inflammation passes into the deeper tissues and forms a felon.

The treatment of onychia should be directed to the

removal of any general cause in the condition of the system. Locally, the treatment should be antiseptic.

The pustules should be opened and thoroughly cleansed with carbolic acid and then iodoform, or euophen should be powdered thickly over the raw surface and covered with antiseptic dressings. These should be renewed daily, and this treatment, if thoroughly carried out, results in a rapid cure.

R. Liq. ferri subsulphatis, $\frac{3}{4}$ ss
 Ung. aquæ rosæ, $\frac{3}{4}$ ss. M.

Or, when there is much pain, the following :—

R. Hydrarg. chlor. mite,
 Pulv. opii,
 Extract belladonna, aa gr. iij
 Ung. aquæ rosæ, $\frac{3}{4}$ ss. M.

Onychia, Syphilitic.—(See *Syphilis of the Nail*.)

Onycho-gryphosis.—(See *Nails, Diseases of*.)

Onycho-mycosis.—(See *Nails, Diseases of*.)

Pacchydermia.—(See *Elephantiasis*.)

Paget's Disease of the Nipple.—(See *Dermatitis, Malignant Papillary*.)

Panaris.—(See *Nails, Diseases of*, also *Neuroses of the Skin*.)

Papilloma.—(See *Verucca*.)

Parasitic Sycosis.—(See *Sycosis hyphogenica*.)

Paronychia.—An inflammation around the edge of the nail—a whitlow or “run around.” It usually results from the nail taking an abnormal direction of growth and pressing into the soft parts. (See also *Nails, Diseases of*.)

Pediculosis (*Lousiness*) is a contagious animal parasitic affection, characterized by the presence of pediculi or lice, and the lesions which they produce, together with scratch marks and excoriations, accompanied by itching. Three varieties of the disease are encountered, which are designated, according to the locality affected, viz., *pediculosis capillitii*, *pediculosis vestimentorum*, and *pediculosis pubis*,

or head, body, and crab lice. (See below, under these titles.)

Pediculosis always occurs as the result of contagion; a spontaneous origin of the parasites is quite incredible. The pediculi do not bite, but are furnished with a sucking apparatus, which they insert into the mouth of a follicle, and obtain blood by the means of this.

The diagnosis of pediculosis may almost always be made by finding the parasites, but these are frequently few in number in any given case, and must be carefully searched for, remembering in the case of each variety its especial habitat. When the pediculi cannot be found, the location of the scratch marks offers valuable circumstantial evidence pointing to the parasitic character of the disease. In the scalp and pubis the presence of nits or ova may almost always be made out, and also at times in the seams of the clothing, and they, of course, are pathognomonic. The prognosis of pediculosis is always favorable, and when the directions are carried out faithfully, a speedy cure may be expected.

Pediculosis Capillitii is due to the presence of the *Pediculus capitis*, or head louse. It is the commonest form of pediculosis. The parasite is found on the scalp alone, the occipital region being the favorite seat. The lice are sometimes found in the scalp and sometimes on the hairs. The ova, or "nits," small, whitish, pear-shaped bodies, glued to the hairs by the smaller end, some distance from the scalp, resemble scales of epidermis. Head lice are usually met with among women and children of the poorer class, though they are sometimes found on persons of refinement. I have several times encountered them on ladies, where they appeared to have been contracted on sleeping cars while traveling. The parasites attack the scalp and give rise to considerable irritation, itching, and consequent scratching. Effusion of serum, pus, and blood results from this, and the

hairs become matted together in a crust. Lice, as a rule, cause more mischief in those who are poorly nourished and ill-cared for. The majority of cases of eczema in the back of the head, in the poorer class of children, are caused by lice, and Dr. J. C. White has pointed out that, in children, when a characteristic form of eczematous eruption can be seen about the mouth, the nostrils, and the ears, the lobes especially, the diagnosis can almost certainly be made of pediculosis capillitii. This eruption, in some respects, resembles that of impetigo contagiosa. When the affection has existed for some time there is a disgusting odor about the scalp; the patient loses sleep from the itching; the mind becomes harassed, and the general health may be more or less impaired.

The best treatment for head lice is to saturate the scalp nightly, for several successive times, with kerosene, care being taken not to allow the oil to trickle down over the face and neck, for fear of its causing excoriations. A night-cap is to be used, and the head washed with castile soap and warm water in the morning. When kerosene cannot be used, the next best thing is the tincture of cocculus indicus. Where, owing to shortness of hair and the presence of eczema, ointments can be employed conveniently and profitably, that of ammoniated mercury, in the strength of twenty to sixty grains to the ounce, will be found useful. An ointment of one drachm of powdered stavesacre seeds to the ounce of lard is also a good remedy. The nits, which are, however, usually killed by the applications of kerosene, are to be removed by repeated washings with soda or borax washes, soft soap, vinegar, dilute acetic acid, or alcohol. Greenough thinks the following formula best in the majority of cases:—

R.	Acid. carbolic,	gr. xv-xxv	
	Ung. petrolii.,	℥j	M.

This not only destroys the lice, he says, but sterilizes the

ova. Persian insect powder (*pulvis pyrethri*) may also be used. The scalp should be dried of moisture and the powder should be dusted or blown through a tube or blower, sold in the shops for such purposes. A muslin cap should then be placed on the head and retained for an hour or so, after which the scalp should be washed out with vinegar and water to kill the nits which are not destroyed by the powder. It is seldom or never necessary to cut the hair. In children it is often more convenient to do so, but in adults it is an unnecessary sacrifice, which may be avoided by patience in relieving the hair of pediculi and nits. The head coverings should be destroyed or thoroughly disinfected by baking or boiling.

Pediculosis Vestimentorum, or lousiness of the body, is produced by the *pediculis corporis*—body, or, more properly, clothes louse—which lives in the garments, and thence makes predatory excursions upon the skin. It is very similar to the head louse, but is considerably larger and somewhat longer in proportion to its breadth, and shows a blackish tinge on the back. Body lice are apt to be found along the seams of the clothing, particularly where this comes in closest contact with the skin, as about the neck, shoulders, waist, and buttocks. As they move over the surface or attack the skin, they give rise to intensely disagreeable, itching sensations. As the parasites multiply, the itching becomes so violent that the distress is almost unendurable; the scratching is generally severe, and long and streaked, or short and jagged scratch-marks, with blood crusts and pigmentation, are characteristic features of the disease. On close inspection, the primary lesions, which are minute, reddish puncta, with slight areola, may be seen marking the points at which the parasite has drawn blood.

The chief seats of the lesions are the back, especially about the scapular region, the chest, abdomen, hips, and thighs. When the affection has lasted for months and years

general pigmentation may occur, as the result of long-continued irritation and scratching. Children are very seldom attacked. The disease is one of want, poverty, and neglect. It sometimes occurs among the better class of people, particularly in the aged; but even here it will be found to have been brought about by want of personal care.

Occasionally one is consulted by persons suffering from what may be called pediculophobia. This is, in reality, a mental affection or a neurosis of the skin. Itching can hardly be present in the ordinary sense of the term, but undoubtedly there must be some perversion of sensation. On examination the skin is found to be absolutely free from symptoms of disease. Such cases require to be managed with much tact. A local placebo with attention to the general health may be used in some cases with success.

To get rid of body lice, a hot bath, with soap, should be taken while the clothing is being heated in an oven or boiled, or when this cannot be done, ironed along the seams with a hot iron, to destroy the parasites with their ova. After the bath, inunctions are to be practiced with an ointment of powdered stavesacre seeds, two drachms to the ounce, digested in hot lard and strained. A lotion of carbolic acid is useful to allay the itching:—

R.	Acidi carbolicæ,	$\frac{3}{4}$ ij	
	Glycerinæ,	f $\frac{3}{4}$ j	
	Aquæ,	℥j.	M.

The following is even better in old cases:—

R.	Acidi carbolicæ,	$\frac{3}{4}$ ij	
	Potass. caustic.,	$\frac{3}{4}$ j	
	Aquæ,	f $\frac{3}{4}$ iv.	M.

The potassa is dissolved in water, and slowly added to the carbolic acid in a mortar. The wash should be much diluted before applying.

The disinfection of clothing should be carefully carried

out, and must be repeated again after a few days, if it has not been entirely successful.

Pediculosis Pubis.—The *pediculus pubis*, or crab louse, though usually found on the pubis, is also encountered in the axillæ, sternal region, and beard, in the male, and in children, especially, upon the eyebrows and eyelashes. Crab lice are found either crawling about the hairs or adhering closely to the surface of the skin; their strong claws permit them to take such hold of the hairs that they are often detached only with difficulty. The ova are very much like those of the *pediculus capitis*, and are found firmly attached to the hairs.

They infest adults chiefly, and give rise to the same symptoms as the other pediculi. Although almost always contracted in sexual intercourse, yet they now and then find their way to the pubis of persons who are entirely unable to account for their presence. The amount of irritation caused by their presence varies with the individual; it is, as a general thing, comparatively slight.

Crab lice may be removed by the application of tincture of *cocculus indicus*, of full strength or diluted, or by any of the ointments or lotions used in the other forms of pediculosis. Mercurial ointment, the well-known popular remedy, is no more effectual than the others, and makes a nasty mess. Its use, in general, is to be avoided, in favor of any of the other applications. Covering the pubis for a few moments with a cloth saturated with a small quantity of chloroform will kill all living crab lice instantly. The hair may then be washed with hot soapsuds, sponged with vinegar, and combed. The sponging with vinegar may be continued once or twice daily for a week, to get rid of all nits. When patients will permit, shaving the pubis shortens the cure greatly.

Peliosis Rheumatica.—(See *Purpura*.)

Pellagra.—A disease occurring chiefly in Italy and some

parts of eastern Europe, and supposed to be induced by eating spoiled corn, by malaria, etc. It is characterized by a chronic inflammation of the skin of an erythematous character, accompanied by violent burning sensations and occasionally runs to blisters. It occurs chiefly on parts exposed to the sun, exposure to which is said to be the immediate exciting cause. The patient becomes debilitated, feverish, loses weight, and displays various nervous symptoms, as vertigo, delirium, etc. The disease has not been met with in this country as yet, but the increasing Italian immigration makes it likely enough to turn up sooner or later. The treatment is to be directed against the general symptoms and condition of the patient, who, of course, should be placed under the best hygienic circumstances possible.

Pemphigus (*Pēm'-fi-gūs*).—Pemphigus is an acute or chronic inflammatory disease, characterized by the formation of a succession of irregularly-shaped blebs, varying in size from that of a pea to an egg. (See colored plate, Fig. D.) There are two varieties, *P. vulgaris* and *P. foliaceus*. In pemphigus vulgaris the disease may attack any part of the body, but is common upon the limbs. It may also attack the mucous membrane of the mouth and vagina. The lesions are blebs, from beginning to end, forming slowly, or sometimes rapidly in the course of a day. They may be few in number or quite numerous, and often vary greatly in size in the same case. They are tensely stretched, like bladders of liquid, and rise directly from the level of the skin, which is not usually reddened, and never elevated. No case should be called pemphigus the bleb of which begins in the form of macules, or large papules. They are clear at first, with serous contents, but later are opaque, containing pus. They do not rupture spontaneously, but gradually dry up, each bleb lasting one to three or six days. The lesions are apt to come in crops; they do not burn or

itch to any marked degree. In adults there is little or no disturbance of the general system. In children the disease is apt to be accompanied by feverishness.

In pemphigus foliaceus the blebs are flaccid and only partly filled with fluid, which seems rather to undermine the epidermis than to lift it into blebs. The lesions often coalesce, involving a large part of the surface; fresh lesions are continually forming; the fluid dries into thin, whitish flakes, which are cast off, leaving an excoriated, red surface, and presenting the appearance of a superficial scald. The disease may last for years and the patient finally succumb to exhaustion.

True pemphigus is a rare disease in this country; only 183 cases are reported in the 123,746 cases of skin disease of the American statistics. It is more common in children than in adults. Poor food and bad hygiene, pregnancy and menstrual disorders, mental depression, general debility and prostration, are among the causes. The disease is not contagious.

The diagnosis of pemphigus is usually not difficult. The presence of blebs does not necessarily indicate pemphigus, as these are developed in other diseases and by artificial means. (See *Dermatitis medicamentosa*.) So-called "pemphigoid" eruptions, obscure in origin and nature, are sometimes met with, but their course is not that of pemphigus, properly so-called. (See *Dermatitis herpetiformis*.) Pemphigus is not under any circumstances to be confounded with the bullous syphiloderm, formerly called "pemphigus syphiliticus." The latter is a purulent bleb, drying up into a thick crust, with a deep ulcer underneath. Erythema multiforme, in the bullous form, and impetigo contagiosa, are occasionally mistaken for pemphigus. A reference to these diseases under their respective titles will show their characteristic points.

The internal treatment of pemphigus is that which is

most important. The general history and circumstances of the case must be looked into, and any defects of constitution or circumstance remedied. Among drugs, arsenic is most potent. Fowler's solution, in doses of four minims, thrice daily at first, rising gradually to the limit of tolerance, may be given. Wine of iron is the best excipient for Fowler's solution in these cases. Arsenic produces its effects slowly, and it should be persisted in for months, if necessary. Even then, a cure, or even amelioration, may fail in so chronic and inveterate a disease. Quinine is of value, and in some cases linseed meal, in ounce doses, with milk, has proved valuable. Cod-liver oil and stimulants may be required at times. The patient should be allowed to rest, and should be free from worry and anxiety, so far as this is practicable.

Local treatment is also important. The blebs should be punctured and evacuated as soon as they have formed. Soothing and astringent lotions, and especially dusting powders, as that composed of equal parts of oxide of zinc and starch, may be employed. Baths containing bran, starch, or gelatine may be employed in some cases. The continuous bath, in which the patient lives, eats, and sleeps for months, has been employed in severe cases. Occasionally, water does not agree, and in these cases mild ointments, as that of oxide of zinc, or diachylon, or one of the pastes mentioned under eczema, may be prescribed.

Pemphigus runs an extremely uncertain course. Relapses frequently occur. When the blebs are numerous, flaccid, imperfectly formed, and inclined to rupture, and when they are rapidly and frequently formed, the prognosis is unfavorable. Repeated febrile attacks also indicate an unfavorable tendency. On the whole, then, we may say that the prognosis of pemphigus must be very guarded, as even when beginning as a slight attack, an unfavorable turn may be taken and the case end fatally.

Pemphigus, Syphiliticus, properly the bullous syphiloderm. (See *Syphilis of the Skin*.)

Perforating Ulcer of the Foot is usually characterized by a small aperture, like the orifice of a sinus, in the centre of a large corn, which leads directly down by a narrow channel to exposed and diseased bone. Sometimes there are granulations around the orifice. The lesion is indolent, there is no pain, even on pressure, and little or no discharge. The ulcer is usually seated over the articulation of the metatarsal bone with the phalanx, generally over that of the first or the last toe. There may be several ulcers, and both feet may be affected. It is supposed to be due to nerve influence. Complete rest, even by the use of an artificial limb, is sometimes necessary to heal this rebellious disease. (See also *Neuroses of the Skin*.)

Perifolliculitis Decalvans.—Under this term is described an unusual form of rapid alopecia characterized by an inflammatory follicular and perifollicular process, a subsequent complete destruction of the hair papilla resulting in a complete alopecia with cicatricial appearance; the lesions tend to grouping.

Three varieties have been noted: (1) a pseudo alopecia areola, with redness and puffiness of the scalp or elevations occurring here and there. (2) The affection described by Quinquaud, where there is discrete suppurative folliculitis ending in soft cicatrices. (3) Lupoid sycosis, where the folliculitis and perifolliculitis form a red, pustular, crusted, and scaly inflammatory mass with thickening of the tissues extending peripherally and with a rough, sometimes keloidal, cicatrix in the centre.

Perliche.—This affection occurs chiefly among children, and is characterized by a whitish, tumid appearance about the commissure of the lips. The lesion spreads from the fold of the commissure upward and downward toward the surface and deeper tissues. A

deep fissure and sometimes several superficial rhagades are formed. The adjacent parts of the lips, of the skin, of the cheeks, and also of the mucous membrane become involved. The disease rarely spreads beyond these parts and has a tendency to spontaneous recovery within four to six weeks, but relapses are common. The affection may be confounded with herpes labialis, but resembles much more closely the mucous patches of hereditary infantile syphilis. The affection is highly contagious. Microscopic examination shows the presence of the *staphylococcus cereus albus* in all cases, while the *staphylococcus aureus* and the *streptococcus plicatilis* is also occasionally found. The affection, though simple, derives much importance from its resemblance to the syphilitic lesion.

The treatment should consist in the frequent use of a bichloride of mercury soap and the application of boric acid powder or weak solution of corrosive sublimate, one-half to one per cent.

Pernio.—(See *Dermatitis congelationis*.)

Petechiæ are the small red spots, quickly changing to blue and livid tints, which characterize the eruption of purpura. (See *Purpura*.)

Phosphorescent Sweat.—Cases of this peculiar condition have been reported as occurring in phthisis and after eating phosphorescent fish, as well as in cases of excessive sweating, the perspiration appearing luminous in the dark.

Phthiriasis.—(See *Pediculosis*.)

Pian.—(See *Frambæsia*.)

Piebald Skin.—(See *Vitiligo*.)

Pigmentary Mole and Nævus.—(See *Nævus pigmentosus*.)

Pityriasis Maculata et Circinata.—(See *Pityriasis rosea*.)

Pityriasis Pilaris.—(See *Keratosis pilaris*.)

Pityriasis Rosea (*pīl'-i-rī'-ā-sīs-rō'-zē-ā*), also called “Pityriasis maculata et circinata,” is an affection which though slight is worth mentioning, because it is frequently mistaken for more important affections. It is characterized by discrete or confluent, macular or maculo-papular lesions, from a pin-head to half-dollar size, slightly or not at all raised. The color of the lesions is rosy or pale red, with a more or less tawny or yellowish tint. The surface is always dry and slightly scaly, and there is a tendency to heal in the centre, giving a circinate appearance. The seats of election are the sub-clavicular, lateral thoracic, and scapular regions, though it may occur elsewhere. The disease generally lasts from one to three months, or longer. It may be mistaken for syphilis, tinea versicolor, tinea circinata, seborrhœa corporis, lichen ruber, and psoriasis, more especially the three first named, some forms of which it closely resembles. Reference may be made to these affections, to ascertain their diagnostic characteristics. The affection, though strongly suspected of being parasitic, has never been proved such. It is not contagious. Internal treatment does not seem to influence the disease, which, however, gives no trouble or annoyance, though often causing mental disquietude. Locally a mild stimulating ointment, or one containing salicylic acid, as the following, may be employed:—

R.	Acid. salicylic.,	℥j	
	Sulphur præcip.,	℥j	
	Vaselini,	℥j.	M.

Pityriasis Rubra is an inflammatory disease, involving usually the whole surface, characterized by red coloration and abundant and continuous exfoliation of epidermis in the form of large, thin, whitish scales. Beginning in one or more spots, the disease spreads rapidly, and in a short time may invade the entire surface, which is uniformly

reddened and covered with whitish or grayish scales, which are being continually cast off and re-formed. The skin, as a rule, is not at all thickened; usually there is little or no burning or itching. The patients are very susceptible to the sensation of cold. The affection is usually chronic, and it may last for years. Pityriasis rubra is a disease of adult life, and is very rare. Its interest lies in the fact that it may readily be mistaken for other important diseases, as eczema squamosum, psoriasis, lichen ruber, and pemphigus foliaceus. It differs, however, from eczema in its universal distribution, absence of marked thickening of the skin, size of scales and their rapid production and abundance, and in the absence of burning and itching. Psoriasis rarely invades the whole, or even the greater portion of the surface, while pityriasis rubra, as a rule, attacks the whole surface uniformly. The scales in psoriasis are thicker and yellowish, the patches markedly infiltrated, and where the process is active there is itching and burning. From pemphigus foliaceus, pityriasis rubra differs in showing no disposition to the formation of bullæ. (See, also, under these various diseases.)

Treatment must be on general principles and adapted to the needs of each case. Locally, bran and other soothing baths, and inunctions with bland and soothing ointments, are often available. Saline aperients, diuretics, iron, quinine, and arsenic may be prescribed, but, in general, time seems to do more than treatment.

Pityriasis Simplex (Capitis).—A scaly disease of the skin, chiefly occurring in the scalp, where it forms the commonest variety of "dandruff." Fine pearly scales form in more or less abundance through the scalp, and are brushed off or drop on the neck and shoulders. There is some itching. After a time, in young persons, the hair begins to fall, and early baldness results. (See *Alopecia*.) Pityriasis of the scalp may be confounded with squamous

eczema, psoriasis, and some forms of seborrhœa, into which latter disease it sometimes merges. In eczema, however, the scalp is redder and more infiltrated, the scales are more scanty, and there is almost always either a history of weeping and oozing, or some characteristic lesions of eczema elsewhere. In psoriasis the scales are apt to have a yellowish tinge; the disease prevails more around the edge of the hairy scalp, and some characteristic patch of psoriasis is almost always to be seen elsewhere on the skin. In seborrhœa the oily element is prominent; the scales are matted together, yellowish, and greasy, so that if they are laid on blotting-paper a grease spot soon forms.

The treatment of pityriasis of the scalp is chiefly local. The scalp should be thoroughly cleansed by shampooing with soap and water, or if the scales are abundant, with *spiritus saponis kalinus* :—

R.	Saponis viridis,	℥ ij	
	Alcoholis,	℥ j.	M

Dissolve by the aid of heat, filter, and perfume with oil of lavender.

This soapy wash is to be mixed with water and used as a shampoo. A teaspoonful with a tablespoonful or more of water, rubbed into the scalp, with the addition of more warm water, will quickly work up into a fine lather that will cleanse the scalp effectually. So soon as this is washed out with pure water and the scalp dried, one of the following applications should be made. If the hair is thick, the following is preferable :—

R.	Acid carbolic,	℥ j	
	Alcoholis seu aq. cologniensis,	℥ iss	
	Glycerini,	℥ iiss	
	Ol. limonis,	℥ iss.	M.

A few drops of this mixture are dropped here and there over the surface by means of a Barnes' dropper, such as is used for eye drops, and then well rubbed into the scalp with a stiff brush. As little as possible should be allowed

to get into the hair, as it is easily made greasy by repeated applications. The following may be used more liberally :—

R. Thymollis, ℥j
 Liq. potassæ, f℥j
 Aq. lauro cerasi, Oss. M.

These and all applications, except the soapy wash, should be made daily, at least at first. The *spiritus saponis kalinus* may be used every two days or every week, as may be necessary, to keep down the accumulation of scales and the matting of hair by the oily applications.

When the hair is thin and short, ointments may be used, and the best of these, for ordinary use, is one containing sulphur :—

R. Sulphur. præcipitat, ℥j-ij
 Ung. petrolii, ℥j. M.

Another ointment, very useful in these cases, is the following :—

R. Acidi tannici, ℥j
 Ung. aquæ rosæ,
 Ung. petrolii, āā ℥iv. M.

A certain number of cases do well under stimulant mercurial remedies, as this :—

R. Hydrarg. ammoniat., ℥j
 Ung. petrolii, ℥j. M.

Now and then, but very rarely, tar is of use. Its odor and stickiness is, however, a serious objection to its use. The following formula will be found as convenient as any :—

R. Ol. cadini,
 Ol. amygdalæ, āā ℥j
 Aq. cologniensis, ℥vj. M.

Internal treatment is sometimes, but not by any means always, demanded. Tonics, and particularly iron, will be found useful. If there is constipation, with a tendency to anæmia, a not very uncommon combination in young persons suffering from pityriasis, the “*mistura ferri acida*” (given under eczema) will be found an efficient tonic aperient.

When an iron tonic alone is required, the following may be given :—

R. Tinct. ferri chlor.,
 Acid. phosphoric., dil., . . . āā . . . f $\frac{3}{4}$ ss
 Syrupi limonis, f $\frac{3}{4}$ j. M.

SIG.—A teaspoonful, or less, in a wineglass of water, thrice daily.

Pills of the iodide of iron are also useful in some cases.

The prognosis of pityriasis capitis, in itself considered, is favorable, although some time may be necessary to effect a cure. Taken in hand early, before the hair has fallen much, the *defluvium capillorum* may be arrested. Little more can be hoped for than this, in the more favorable cases, and when “dandruff,” with progressive baldness, has existed for some time, the hair cannot be made to grow again by any drug at present known.

Pityriasis Versicolor.—(See *Tinea versicolor*.)

Plica Polonica (*plī'-kă pō-lōn'-ī-că*) is most commonly not a disease in itself, but is, practically, aggravated lousiness. It was formerly common in Poland and Austria, and occurred chiefly among the low and filthy inhabitants of that part of Europe. It consists in a matted and tangled condition of the long and neglected hair, glued together by discharges from the scalp irritated by lice. It was, I had supposed, unknown in this country, because it requires a lifetime of assiduous cultivation of dirt and neglect to produce it. I have heard patients express the fear that they were victims of this disease, and have even heard the diagnosis made by physicians, but I used to think then that no case of true plica Polonica had ever occurred in this soap-and-water-ridden country since the arrival of the settlers at Jamestown. However, a well-authenticated case has recently been reported by Stelwagon.*

(* Am. Jour. Med. Sci., Dec., 1892. It occupied a dollar-sized area above the nape, grew to four feet long in twelve years, but its mode of onset was unknown. (See Crocker, “Diseases of Skin,” Am. Ed., p. 820. See also Ohmann-Dumesnil, Internat. Med. Mag., July, 1893.)

The treatment is simple in the cases of pediculosis capitis which are severe enough to be sometimes called by this name. The hair is to be cut short, if really necessary, parasiticide remedies applied (see *Pediculosis capitis*), and cleanliness enjoined.

Podelcoma.—(See *Fungous Foot of India*.)

Poison Vine or Poison Oak Eruption.—(See *Dermatitis venenata*.)

Pompholyx.—(See *Dysidrosis*.)

Porcupine Disease.—(See *Ichthyosis hystrix*.)

Porrigo.—(See *Eczema* of the head.) *P. decalvans* (see *Alopecia areata*). *P. favosa* (see *Favus*).

Port-Wine Mark.—(See *Nævus*.)

Prickly Heat.—(See *Miliaria*.)

Prurigo (*prô-rî'-gô*).—An excessively rare disease in this country, though occasionally met with in Europe. The American statistics show only 34 cases in 123,746 of all varieties of skin disease. It usually begins at an early age, within the first or second year, in the form of an urticaria, and commonly lasts through life. When developed it consists of firm, pin-head- to pea-sized elevations under and in the skin, usually discrete, but sometimes grouped. The color of the lesions is pale red, or like the surrounding skin; there are no scales. The disease usually first attacks the extensor surface of the lower extremities, particularly the tibiæ. The forearms are next invaded, and then the trunk. The head is rarely attacked; the palms and soles never. In severe cases buboes may form in the glands of the inguinal regions.

The eruption is accompanied by intense itching, and consequently blood crusts are always present, and in time the hairs are torn and rubbed off, and the skin becomes harsh, thickened, and pigmented.

The life of the patient is one of untold misery, far surpassing, according to the accounts of European physicians,

that to which any other disease gives rise, and suicide is the occasional recourse of the unfortunate victim.

The diagnosis of prurigo is not difficult, although cases of eczema are occasionally reported in the journals under this name, usually by physicians not conversant with skin diseases. The disease has a distinct and well-defined history, which prevents it from being mistaken for eczema. Eczema, indeed, often accompanies prurigo, being aroused by scratching or the application of remedies, but this can be cured by appropriate treatment, while the prurigo goes on, unaffected by treatment. Pruritus and pediculosis corporis used to be called prurigo, but the common consent of writers on skin diseases for the past fifteen years has confined the designation to the disease just described. There is no symptom but that of itching in common between these affections, and reference to the titles *Pruritus* and *Pediculosis corporis*, in this work, will show how different are the symptoms.

The treatment of prurigo should be first directed to the general condition of the patient. The diet should be generous. Everything that will tend to improve the state of the patient's health is to be taken into consideration. Iron, arsenic, quinine, and especially cod-liver oil, may be prescribed. External remedies are particularly useful. Baths of various kinds, and also tar, naphthol, and sulphur applications, are particularly to be mentioned.

The prognosis of prurigo is not very hopeful. It is said to be curable if treatment is commenced in childhood, but scarcely so in the adult. If a case is reported as having been easily cured, it is probably because a mistake has been made in diagnosis.

Prurigo Senilis.—(See *Pruritus* and *Pediculosis corporis*.) The name prurigo was formerly given to the disease now known by these names.

Pruritus (*prô-rî'-tűs*).—Pruritus is a functional, cutaneous affection, manifesting itself solely by the presence of the

sensation of itching, without structural alteration of the skin. The various forms of itching encountered in the course of many diseases of the skin, accompanied by organic changes, have been mentioned elsewhere, in connection with the diseases in which they occur. Pruritus, it must be remembered, is a distinct affection. The first thing that occurs is itching, and any lesion of the skin visible later is the result of the scratching to which this symptom gives rise. The feeling varies in different cases. Sometimes the patient describes it as being as if a piece of rough flannel were in contact with the skin. At other times it is said to be like the crawling of insects, or like a tingling sensation, with the desire to scratch. It may be slight, or so severe as to be almost intolerable. It is most frequent in middle life and old age (the latter is one variety of the "prurigo senilis" of old writers, the other being lousiness).

The itching arouses an irresistible desire to scratch and rub, with the result that the surface is generally seen to be somewhat roughened, hyperæmic, and excoriated in a slight or marked degree. In other cases the external signs are slight, so that, were it not for the statement of the patient, the presence of any marked disorder might be doubted. The itching is usually intermittent, and is always worse at night. Pruritus rarely invades the whole body at one time, though various regions may in turn be attacked. In most cases it occurs in certain localities, and chiefly the trunk, scalp, genitalia, and anus.

Pruritus vulvæ must not be confounded with other itching affections of the female genitals. The itching may be seated in the labia, vagina, or clitoris, and is an exceedingly distressing affection. It is more apt to occur in middle or old age. In children it is often caused by the presence of ascarides in the rectum and about the anus.

Sometimes pruritus vulvæ is accompanied by occasional

nervous sensations starting from the clitoris and neighborhood and radiating through the body.

The sensation is not, strictly speaking, one of itching, but rather a "nervous crisis."

Pruritus scroti is the form generally met with in the male. It may involve this region alone, or may extend along the perineum to the anus. The orifice of the urethra may also be the seat of the disease. The sensations are usually intensely annoying, and cause the patient to rub and scratch violently. It is worse at night, and is aggravated by warmth.

In *pruritus scroti* the same radiating nervous impression is at times observed as that which occurs in *P. vulvæ*.

Pruritus ani occurs in both sexes, and in children as well as adults. The itching may be around the orifice or just within the rectum. In middle-aged or elderly persons it is very often associated with hemorrhoids. It is, if possible, more intolerable than any other of the local varieties. Sometimes it is constant, but more often it comes and goes from time to time, and is also worse at night.

The causes of pruritus are extremely varied, and it is important to keep this in mind, for the cause must, in most cases, be removed in order to obtain a cure. It may be caused by physiological changes, as gestation, or by any irregularity of the menstrual function in young women. Occasionally, it is associated with hysteria, and it is sometimes met with at the climacteric period. Leucorrhœa is a common cause. Organic diseases of the uterus and ovaries are, at times, accompanied by it. Pruritus is likewise met with in many cases of jaundice, and is sometimes a distressing symptom. Various diseases of the nervous system are accompanied by pruritus. Gastro-intestinal derangement, constipation, genito-urinary diseases, in both sexes, and, finally, the ingestion of certain medicines, and notably of opium, may give rise to the affection. It would

hardly be necessary to add, were not the mistake so often made, that true pruritus is in no way caused by either vegetable or animal parasites. When these are present it is by accident, or the disease is not pruritus.

The diagnosis of pruritus presents no difficulties. It is a disease of the skin, without any primary sign of alteration in its structure. Whatever lesions may be present are secondary, and the result of scratching, or of strong applications made by the patient. The diagnosis depends upon the patient's statement as to the subjective symptom of itching. Pruritus is most apt to be confounded with pediculosis, the secondary symptoms of the two diseases, scratch marks and excoriations, being similar. These, however, are more marked and definite in character in pediculosis. The finding of lice will settle the question. They are to be carefully looked for in the clothing, and every case of so-called pruritus should be suspected to be pediculosis until the absence of the parasite is demonstrated.

The treatment of pruritus is a matter demanding careful consideration and study in each individual case. A successful result will, in most cases, only be attained by recognition and removal of the cause. Constitutional and local remedies are both demanded. The internal remedies are to be directed against the cause, whatever the nature of this may prove. If constipation exists, the bowels are to be suitably regulated, salines being usually preferable. If there is a flatulence or dyspepsia of any kind, such a diet is to be prescribed as shall overcome the digestive difficulty, and coarse, irritating, and indigestible foods are, in all cases, to be avoided. Exercise and fresh air are beneficial. A sojourn at some mineral springs, particularly those of Saratoga or Richfield, may at times be recommended. At the former a course of the aperient waters, of which the Hathorn is best, may be taken. In many cases close attention to these details will be followed by the most gratifying results.

As regards drugs, the usual tonic and alterative medicines are to be employed. Irregular menstruation must be treated by the judicious use of iron or other remedies, cod-liver oil, etc. Quinia and strychnia are sometimes of use. Recourse may be had to bromide of potassium and chloral, alone or together, in order to subdue general nervous symptoms. Morphia should in no case be used, as it tends to aggravate the itching.

External treatment affords great relief, and is to be used in all cases. Cold and hot douches, used alternately, or hot water, applied as hot as it can be borne, or plain vapor baths are often useful. Medicated baths, containing three to six ounces of bicarbonate of sodium, or two to four ounces of carbonate of potassium or borax, to thirty gallons of water, will at times afford relief. Besnier recommends starch baths and sponging the whole body with a mixture of aromatic vinegar, two hundred and fifty parts, carbolic acid, five parts, after which, powder the surface with ninety parts of starch and ten parts salicylate of bismuth or salicylic acid. Sulphuret of potassium and sulphur-vapor baths are sometimes used with success. Inunctions with a bland oil, as almond oil, may be practiced after these baths.

Lotions of various kinds are the most generally useful applications in pruritus, and those containing carbolic acid are, by far, the most generally efficient. Carbolic acid, in fact, is worth all the other remedies put together as an anti-pruritic, and should always be preferred, to begin with, unless some reason exists against its use. It may be employed in lotion, in the strength of five to twenty grains to the ounce of water, with a little glycerine. In the following lotion the anti-pruritic effect of potash is added to that of carbolic acid:—

R.	Acidi carbolici,	℥j	
	Potassæ fusæ,	℥ss	
	Aquæ,	f℥ viij.	M.

When other remedies fail, oil of peppermint or menthol may be applied, especially over circumscribed, itchy localities, avoiding the mucous and muco cutaneous surfaces, where such applications are apt to give pain. Morphia in solution, one to three grains to the ounce; cyanide of potassium, fifteen to thirty grains to the pint; dilute hydrocyanic acid, from one to four drachms to the pint; chloroform; chloroform and alcohol, a drachm to the pint; lead water; dilute ammonia water; dilute nitric acid, ten minims to the ounce of water, acetic acid, or vinegar; chloral lotion, ten to thirty grains to the ounce of water, are all serviceable remedies, which may be tried singly or in succession in troublesome cases. "Liquor picis alkalinus," an alkaline solution of tar, the formula of which is given under eczema, is a most valuable remedy; also "Liquor carbonis detergens." They should be used at first in the strength of two or more drachms to the pint of water, gradually increasing.

In some localized forms of the disease ointments are to be used in preference to lotions; the following is a good one:—

R.	Acidi carbolici,	gr. x-xv	
	Ung. zinci oxidi,	℥j.	M.

The following is recommended in pruritus vulvæ (though ointments should rarely be used in this form of pruritus):—

R.	Hydrarg. chlor. mite,	
	Ext. belladonnæ,	aa ℥j
	Ung. aquæ rosæ,	℥j. M.

The following is a good ointment, but not to be used on abraded surfaces, and only with caution on the muco-cutaneous surfaces:—

R.	Camphoræ,	
	Chloralis hydratis,	aa ℥j
	Ung. aquæ rosæ,	℥j. M.

The camphor and chloral are to be rubbed together until fluid, and then added to the ointment. The mixture may also be used as a lotion with glycerine and water.

In pruritus of the female genital organs, water as hot as can be borne, sponged upon the parts, forms an admirable anæsthetic, and should be used in all cases, whatever other treatment is added. Sponging with hot water may be followed by the application of one of the following lotions: Carbolic lotion as given above; sulphurous acid, or, solution of alum in barley water. A lotion containing a drachm of the sulphite of sodium, four drachms of water, and an ounce of glycerine may be painted on. Sometimes emollient poultices, particularly a poultice of freshly-made almond meal, which evolves a small quantity of hydrocyanic acid, will be found very soothing. Such poultices should always be sprinkled with boric acid.

Injections of sulphate of zinc, five to ten grains to the ounce of water, used on alternate days with similar injections of bichloride of mercury, 1 to 2000, while the external genitals are bathed once or twice daily with one of Eichhof's corrosive sublimate soaps, form together a useful adjuvant to any treatment which may be employed.

When the affection is marked by "nervous crises," starting from the clitoris and radiating through the body "like a shock," as patients describe it, a little finely powdered cocaine dusted over the clitoris and neighboring parts will give instant though only temporary relief. The following formula may be employed:—

R.	Pulv. cocaine muriat.,	ʒj.	
	Pulv. acid. boric.,	ʒiij.	M.

Pruritus ani is usually connected with congestion and enlargement of the hæmorrhoidal veins. The bowels should be kept open and the following injection should be used after each stool:—

R.	Pulv. zinci sulphat.,	ʒj.	
	Pulv. aluminis,	ʒj.	M.

Heat in an earthen vessel until all the water of crystalliza-

tion is driven out. Then divide into eight powders. Dissolve one in an ounce of water for each injection.

The injection of hot solutions of boric acid (saturated) in water before relieving the bowels, or perhaps, even better, the use of enemata containing carbolic acid, ten to fifteen grains to the ounce, are beneficial.

Pruritus ani is generally best treated by means of ointments. One of the best of these is an ointment containing two drachms of tar to the ounce of cold cream. Another, composed of equal parts of belladonna and mercurial ointments, is to be applied on a pledget of lint. An oil, composed of one hundred grains of carbolic acid in an ounce of oil of sweet almonds, is a more agreeable application than those mentioned, and I think just as efficacious. The following formula, recommended by Dr. J. V. Shoemaker, I have found useful:—

R.	Sulphur. præcipitat.,	℥j	
	β-Naphthol,	gr. x	
	Morphiæ sulphat.,	gr. ss	
	Bismuthi subnitrat.,	℥ss	
	Ung. zinci ox.,	℥ss.	M.

Penciling with oil of peppermint, pure or with an equal proportion of glycerine, may do in mild cases, where the patient does not scratch and tear the parts, but it cannot be employed where there are abrasions or fissures of the muco-cutaneous surface. Cocaine in ten per cent. solution gives temporary but complete relief. The application of any of these remedies should be preceded by sponging with very hot water.

In pruritus scroti the following prescription will be found useful:—

R.	Bismuthi subnitratis,	℥ij	
	Acidi hydrocyanici, dil.,	f℥ij	
	Mist. amygdalæ,	f℥iv.	M.

In the pruritus of jaundice, mercurial ointment is said to be of value, also lotions of chloroform (one drachm to five

of glycerine), cyanide of potassium (one drachm to the pint of water), and acetic acid baths or lotions in the strength of half a pint of the acid to three gallons of water, or about two quarts of strong vinegar to an ordinary thirty-gallon bath. I may say here that a solution of benzoic acid, alone or with an alkali, is known to aid in the dispersion of bile pigment, and may, therefore, aid in the relief of this form of pruritus. I have not, as yet, had an opportunity to try this.

I cannot leave the discussion of this important subject, the treatment of one of the most painful and annoying of all diseases of the skin, without adding some general remarks, the result of my experience, not only in the treatment of pruritus, but also of other skin diseases of a chronic and stubborn nature. In all of these much depends upon the care and thoroughness with which the physician's directions regarding diet and regimen are carried out. To ensure this the directions themselves must be full and explicit. The patient's case must be made the subject of careful study; the exact diet suitable to the individual must be decided upon and enforced in such terms as to leave no doubt in the patient's mind as to the importance of every detail. Generalities in the way of directions, with a careless indication, in broad terms, of the articles of diet to be used and avoided, are not likely to produce a serious impression on the patient's mind, and the failure to amend is followed by a general despondency and distrust of all remedies.

The prognosis of pruritus should be guarded. The disorder, as a rule, is obstinate, often extremely so. The prognosis often depends largely upon the cause and our ability to remove it. The patient must be encouraged to persevere with and thoroughly carry out the treatment. In grave cases melancholic symptoms may be present. Occurring in the aged, the prospect of ultimate cure is poor.

In middle-aged females, pruritus vulvæ is the commonest form met with; a most distressing malady, and one which calls for every possible effort to ameliorate it on the part of the physician.

Pruritus Hiemalis, or winter pruritus, is a peculiar form of itching, dependent upon atmospheric influences and occurring chiefly in cold weather. It usually makes its appearance in October, and lasts until spring, being worse in clear, frosty weather, and disappearing at times if the weather becomes warm and moist. It occurs chiefly on the inner surfaces of the thighs, about the knees, the calves, and the ankles. Most of the cases described as *Michigan itch*, *Prairie itch*, etc., are cases of pruritis hiemalis, though some are scabies, eczema, or urticaria. (See under these heads.) The affection may be relieved, but not usually cured. Emollient ointments, as vaseline and glycerine, with alkaline baths, give most relief. Occasionally the carbolic acid wash is useful. The undergarments should be soft and un-irritating.

Psoriasis (*sō-rī'-ā-sīs*).—Psoriasis is a chronic disease of the skin, characterized by reddish, slightly elevated, dry, inflammatory patches, variable as to size, shape, and number, covered with abundant whitish or grayish mother-of-pearl-colored, imbricated scales. The disease varies greatly in its extent and intensity in different cases, sometimes showing a typical development; in other cases represented by one or two obscure lesions. It possesses, almost invariably, however, certain characters which serve to identify it. The lesions begin as small, reddish spots, scarcely raised above the level of the skin, which almost immediately become covered with whitish, imbricated scales. They often develop rapidly, reaching the size of coins in a few weeks. At other times the course of the disease is more sluggish. The extent of the eruption varies greatly. A few patches may be all that are present, or the entire

surface from head to foot may be involved, with scarcely a clear spot to be found. Commonly, the disease shows itself in the form of variously-sized, scaly patches, scattered over different parts of the body. The patches are characteristic. They are usually rounded, sharply defined from the surrounding skin, and consist of a mass of imbricated, yellowish-white scales on a red base. When the scales are picked off, a smooth, shiny, reddish surface is shown underneath, on which can be perceived a few pin-point-sized drops of blood. The abundance of the scales is a marked feature in some cases; where they are formed rapidly, that is, in well-developed cases, the patient's bed may be filled in the morning with a handful of scales which have accumulated during the night. When the disease exists about the joints, fissures may show themselves. *There is no watery discharge at any period of the disease.* Sometimes the eruption takes on a highly inflammatory character, with redness, swelling, and severe burning and itching, while at other times all these symptoms are much less marked, and, in fact, the patient would hardly be aware of the existence of the disease, except for its appearance. Though the individual patches of psoriasis may be small, and generally are so, yet they sometimes coalesce into hand-sized or larger patches, or may even cover the greater part of a limb.

Psoriasis may occur on any part of the body, but is most apt to be seen on the extensor surfaces of the limbs. It is sometimes found on the elbows and knees when it shows itself nowhere else. The back is more commonly attacked than the chest, and the scalp is a frequent seat of the disease. In the latter locality it sometimes occurs in patches, but more frequently as a diffuse and abundant scaliness. It is apt to extend a little beyond the border of the scalp, especially behind the ears and on the forehead, and this is quite characteristic. Psoriasis does not occur upon the

mucous membranes. The so-called "psoriasis of the tongue" is an entirely different condition, related to cancer. (See *Leucoplakia buccalis*, under *Tongue*, *Diseases of*.) Psoriasis is not contagious. Efforts have been made to show that it is in reality a parasitic disease, but the testimony brought forward is not convincing to my mind. The symmetrical distribution, so very common in psoriasis, and the course of the disease, is contrary to this view. However, it is possible that essentially different affections may have been included under the designation of psoriasis. A case has been reported of impetigo herpetiformis, where, after the cure of the original affection, a patch of psoriasis took the place of each patch of impetigo.* In rare cases, as White has pointed out, psoriasis may degenerate into cancer. Cases of cancer occurring after psoriasis have been attributed to the prolonged use of arsenic. Both possibilities should be borne in mind.

The cause of psoriasis is not known. It is apt to occur in well-nourished, rosy-complexioned, light-haired people, the "picture of health," excepting that they are apt to be a little rheumatic. Now and then, however, it is met with in thin, worn persons, who are in poor health. Psoriasis rarely occurs in children, though Stelwagon has reported a case where it occurred in a child between three and four years of age. It rarely appears to be hereditary, but this tendency is occasionally met with. Some cases of psoriasis are worse in winter, and disappear almost or entirely in summer; others are worse in summer. Diet, I think, has usually little influence in causing the disease, though in some cases it may influence its course quite markedly. Psoriasis and syphilis are not connected in any way. There is a syphilitic eruption, sometimes called "syphilitic psoriasis," because the lesions resemble those of psoriasis. This

* Dubreuilh, *Ann. de Derm. et de Syph.*, 1892, p. 392.

most unhappy term has caused much confusion of mind, but it must be remembered that the cause, course, and treatment of syphilis differ *in toto* from those of psoriasis. (See *Syphiloderma papulosum*.)

The diagnosis of psoriasis is easy when the affection is well-developed and presents its typical appearance. The form and aspect of the lesions, and the history of the case, will usually serve to determine its nature. Scanty and ill-developed eruptions of psoriasis are, however, at times, distinguished only with difficulty. Nevertheless, it is an important matter to accurately determine the nature of the disease, for its treatment is widely different from that of the affections with which it is liable to be confounded; its prognosis also is different, and, in addition, two of the other affections are contagious.

Two or three small patches of psoriasis occurring alone, upon the arms or legs, may be mistaken for eczema. Itching, however, is always present in eczema, and therefore, itching is one sign that an eruption in question is not of this nature, though not a sure one, since psoriasis also sometimes itches.

In the majority of cases of eczema, there will be a history of moisture at some time. Psoriasis is always dry and scaly; never moist. The scales of psoriasis are more abundant, larger, and whiter than those of eczema. The patches of psoriasis are usually bold and well-defined in outline, while those of eczema fade into the surrounding skin.

Syphilis, in the form of the papulo-squamous syphiloderma, is very apt to be mistaken for psoriasis, and *vice versa*. Psoriasis, however, is more apt to be symmetrical in its distribution. It inclines to involve a large portion of the surface at once, or to be found in regions remotely separated, which the squamous syphilitic eruption rarely does. In psoriasis the lesions seem to be on the surface,

so to speak. They are very scaly, but without much infiltration. The syphiloderm, on the other hand, is deeply indurated, and is only scantily covered with scales. In psoriasis the knees and elbows are apt to be involved. In syphilis these are not often attacked. Occurring on the palms or soles, the disease is apt not to be psoriasis, which is very rare in this locality. The color, though often deceptive, sometimes aids in diagnosis. It is usually much lighter in psoriasis, while in syphilis it is apt to be a dusky, ham color. The age of the patient and the duration of the disease may give a clue to the diagnosis. Psoriasis generally first shows itself before the age of twenty; this form of syphilis later. The history of psoriasis is that of a chronic disease, lasting for years continuously, or in an intermittent manner. Syphilis rarely retains one form for any length of time. Other points in the history, infection, the occurrence of other lesions, etc., may come into use. Itching is rare in syphilis, common in psoriasis. Finally, the touchstone of treatment may be resorted to in very obscure cases.

Tricophytosis circinata and psoriasis are sometimes mistaken for one another, but the patches of tricophytosis are less inflammatory, red and infiltrated, and are much more superficial. The scales in tricophytosis are larger and lighter, and the patches show no attempt at symmetry. The microscope shows the existence of a fungus in the scales of tricophytosis circinata, which is absent in psoriasis, and a history of contagion may often be obtained in the former disease which is absent in the latter.

Psoriasis may occasionally be mistaken for eczema seborrhœicum, as this disease occurs on the chest and back; it may also be confounded with severe forms of lupus. A comparison of the description just given of psoriasis with that of the two former diseases will show in what points the difference lies. Psoriasis may likewise be mistaken for

lichen ruber planus, pityriasis rubra, or lupus erythematosus. (See Table of Differential Diagnosis.)

DIFFERENTIAL DIAGNOSIS

BETWEEN

PSORIASIS.

1. Eruption terminates abruptly.
2. Scales thick and numerous.
3. Eruption always dry.
4. Eruption remains the same from week to week.
5. Scales large and pearl-like.
6. Itching less severe.
7. Smaller patches of eruption.
8. Seat of predilection on elbows, knees, etc.
9. Great uniformity of lesions.
10. Less induration but greater vascularity.
11. When affecting scalp, usually limited to hairy parts.

SQUAMOUS ECZEMA.

1. Eruption fades gradually into surrounding skin.
2. Scales thin and scanty.
3. Presence of moisture at some stage.
4. Lesions change in character from time to time.
5. Scales small and yellowish.
6. Intense itching.
7. Patches of eruption large.
8. No seat of predilection.
9. No uniformity of lesions.
10. Great induration of patches.
11. Ears and face frequently attacked in eczema of the scalp.

PSORIASIS. (*)

1. Negative history.
2. No secondary lesions.
3. Symmetry of lesions.
4. Eruption very extensive.

SQUAMOUS SYPHILODERM.

1. History of syphilis.
2. Presence of secondary lesions.
3. No tendency to symmetry.
4. Eruption not usually extensive.

* J. Abbott Cantrell (*Philadelphia Polyclinic*, Jan. 15, 1893) says that the successive crops of lesions in psoriasis and their possible coalescence is a diagnostic point of difference between this affection and the squamous syphiloderm.

PSORIASIS.

Scales abundant and pearly white.

6. Covers most of body.

7. Knees and elbows generally attacked.

8. Lesions of bright red color.

9. Infiltration less marked.

10. Infiltration simply inflammatory.

11. Edges not raised after removing scales.

12. Scales loose.

13. Patches bleed when irritated or rubbed.

14. Severe itching.

15. No ulcerative tendency.

SQUAMOUS SYPHILODERM.

5. Scales scanty and transparent or gray.

6. Eruption usually limited to area.

7. Knees and elbows rarely affected.

8. Eruption ham-colored.

9. Skin markedly infiltrated.

10. Products of inflammation cellular.

11. Edges of patches raised.

12. Scales adherent.

13. Patches do not bleed easily.

14. Slight itching.

15. Patches have a tendency to ulceration

DIFFERENTIAL DIAGNOSIS

BETWEEN THE PALMAR LESIONS OF

SYPHILIS.

Often unilateral. Patches may be small and round; usually single and large, irregular outline; color coppery or purplish. Macular *looking*.

Always dry, deep fissures at times.

No itching.

Made up of an aggregation of smaller patches.

PSORIASIS.

Eruption extremely rare. Usually bilateral. Patches small, round, scaly; no exudation, no cracking and thickening; color rather dark.

No discharge.

Seldom itch, and then not severely.

Enlarges by peripheral augmentation of smaller patches.

ECZEMA.

Usually bilateral. Patches large, sharply defined, much exudation, cracking; color light.

Serous, often bloody discharge from cracks.

Very severe itching.

Same as psoriasis in this respect.

SYPHILIS.

Edges thicker than centre, covered with an overhanging scale.

Usually no cracking, but sometimes this is severe.

History and other lesions chronic, rebellious to treatment.

Almost always confined to adult age, and is result of acquired syphilis.

Once removed usually stays away.

No tendency to form a definite pattern.

PSORIASIS.

Other lesions.

Manifests itself in early life, usually before the age of 20.

Tends to recur through life at intervals.

Definite pattern.

ECZEMA.

Edges look as if cut or punched out.

Other lesions, particularly on back of hands.

PSORIASIS.

1. Intense itching.
2. Papules rounded and never umbilicated.
3. Desquamation from the start.
4. Marked desquamation.
5. Induration more marked.
6. Scales "mother of pearl" appearance.
7. Cause bleeding when detached.
8. Attacks extensor surfaces, elbows and knees.
9. Lesions rounded in shape.
10. Patches usually form.
11. Papules united lose their identity.
12. Lesions do not follow course of nerve distribution.

LICHEN RUBBER PLANUS.

1. Slight itching.
2. Papules flat and often umbilicated.
3. No desquamation at first.
4. Slight desquamation.
5. Slight induration.
6. Scales grayish or yellowish.
7. No bleeding when detached.
8. Flexor surfaces usually attacked.
9. Lesions irregular or angular in outline.
10. Patches sometimes form.
11. Papules retain their individuality.
12. Lesions follow nerve trunks.

PSORIASIS.

1. Small portions of skin attacked.
2. Patches indurated.
3. Scales much less numerous.
4. Scales white and pearly.
5. Scales small.
6. Scales remain flat.
7. Pruritus well marked.
8. Inflammation deep seated.
9. Scales form less rapidly.
10. Frequently attacks children.

PSORIASIS.

1. Seat of predilection, elbows and knees.
2. Scales pearly white.
3. Scales abundant
4. Scales readily removed.
5. Sebaceous glands normal.
6. Numerous patches of eruption.
7. Centre of lesions red and elevated.
8. Character and seat of eruption changes from time to time.

PSORIASIS.

1. Eruption occurs in irregular patches.
2. Scales large and flat.
3. Scales dry and pearly.
4. Skin red and inflamed.

PITYRIASIS RUBRA.

1. Eruption invades most of the body.
2. Patches not thickened.
3. Scales very abundant.
4. Scales yellowish, thin, and papery.
5. Scales usually very large.
6. Scales turn up when detached.
7. No itching.
8. Inflammation very superficial.
9. Scales reproduced very rapidly.
10. Disease of adults.

ERYTHEMATOUS LUPUS.

1. Usually occurs on face.
2. Scales yellowish or gray.
3. Scales scanty.
4. Scales firmly adherent to sebaceous glands.
5. Mouths of glands patulous.
6. But one or two patches of eruption.
7. Centre of patches paler and depressed.
8. Lesions run a regular course without change.

ECZEMA SEBORRHÆICUM.

1. Eruption diffuse.
2. Scales minute or caked.
3. Scales yellow and greasy.
4. Skin pale or pinkish under scales.

PSORIASIS.

5. Skin indurated.
6. Scales, when detached, often cause bleeding.
7. Seat of election on elbows and knees.

ECZEMA SEBORRHŒICUM.

5. No induration.
6. Scales easily removed.
7. Lesions often confined to scalp.

PSORIASIS.

1. Non-parasitic affection.
2. Non-contagious.
3. Runs a chronic course.
4. Eruption circular, usually annular.
5. Scales abundant and pearly.
6. Patches deep red and infiltrated.
7. Frequent symmetry of arrangement in the lesions.
8. Often seen on knees and elbows.

TINEA CIRCINATA.

1. Parasitic disease.
2. Communicable.
3. Acute affection.
4. Lesion tends to become annular.
5. Scales shreddy and few.
6. Patches light red and not infiltrated.
7. Patches not symmetrical.
8. Lesions occur about face and neck, or about groins and inside thighs.

The constitutional treatment of psoriasis, like that of eczema, should be based on a careful study of the history and habits of the patient. Attention should be given to the patient's general health and his condition, whether stout and well-nourished, or thin and delicate. Regard must be had also to any functional derangement. The history of the eruption itself must also be inquired into, as to its acuteness or chronicity, as to local and constitutional treatment which may have been previously employed, together with the effects of the same. In addition, inquiry should be made regarding the influence of the seasons, and whether the eruption is apt to disappear for a time and to break out again.

Fortified with this knowledge, the medical treatment can be entered into intelligently. In the large majority of cases arsenic is preëminently the remedy. But, while arsenic is

as near a specific as, in the nature of things, it is possible for any medicine to be, yet it must be employed judiciously if its good effects are to be obtained, or even if we do not wish to do harm. Arsenic should not, as a rule, be given where there is much gastric irritation, and it is hardly necessary to say that it should not be continued, should it disagree even slightly. The patient should be warned of its possible effects, and should be under the constant watch of the physician; on the first symptom of indigestion, pain in the stomach or bowels, or diarrhœa, the dose should be lessened or the use of the medicine suspended. Large or almost toxic doses do not hasten the cure of psoriasis; they sometimes even retard it by upsetting the stomach. Sometimes only a minute dose, as half a minim of Fowler's solution, is borne at first, when, later, tolerance is gained and a full dose can be given. Some patients need and will bear large doses of arsenic, but this idiosyncrasy must be learned by careful, tentative increase of the dose, beginning always with a moderate one. Arsenic should not usually be given in acute and inflammatory forms of psoriasis. Arsenic acts slowly. When, in a case of psoriasis, it is going to do good, improvement generally begins to be shown after two or three weeks, but to get the full benefit of the drug it must be given for several months, and its administration should be continued for several months after the eruption has disappeared. *Liquor potassii arsenitis*, or Fowler's solution, is the best form in which to administer arsenic. It should never be administered in drops, as mistakes are likely to occur. It may be given in water alone, or in a bitter infusion or tincture, or with wine of iron :—

R. *Liq. potas. arsenit.*, ʒij
 Vini ferri, ad f ʒiv. M.

SIG.—A teaspoonful in water, after meals.

The dose here is four minims—a fair average dose for an adult. The amount may be gradually increased, say every

three days, until an effect upon the eruption becomes perceptible, or until the limit of tolerance is reached.

Sometimes it is desirable to give arsenic in pill form:—

R. Pulv. acidi arseniosi, gr. ij
 Pulv. piperis nigræ,
 Pulv. glycyrrhizæ rad., āā . . . ℥ij. M.
 Fiat pil. No xl.
 SIG.—One after meals.

Or occasionally powders may be preferred:—

R. Pulv. acidi arseniosi, gr. ij
 Pulv. sacch. lactis, gr. cl. M.
 Fiat chart. No. xl.
 SIG.—One immediately after meals.

But neither pills nor powders are as effective as Fowler's solution, and I rarely prescribe them unless forced by circumstances to do so.

Some cases of psoriasis require tonics, evidently, from the appearance of the patients; others will be found, on experience, to demand such treatment. Tincture of the chloride of iron is the best medicine to use in those meagre, worn-looking persons, as nursing mothers when the attack has come on during lactation. Next to iron in value is cod-liver oil, and these remedies occasionally succeed when arsenic fails. In acute inflammatory cases diuretics are occasionally of service. Acetate of potassium, in half-drachm doses, may be given three or four times a day, in a wine-glass of water. The alkaline mineral waters are also of service. Iodide of potassium has of late been highly lauded. I have tried it repeatedly without gaining any benefit whatever. Other drugs have been administered in psoriasis, but I think that those just mentioned will be found sufficient.

The local treatment of psoriasis is of more or less importance, according to the nature of the case. When the lesions are few, small, and widely disseminated, and there are no disagreeable subjective symptoms, local treatment is

inconvenient and need not be employed. When, however, there are a few large patches, or when the eruption is situated on some conspicuous part of the person, or gives rise to annoying burning or itching, local treatment is required and will be found advantageous. If there are scales, these should be first removed by rubbing with *sapo-viridis* and hot water, or by the use of a hot-water bath. If the patches are few in number, large and very scaly, the following solution, well rubbed in, will remove the scales readily, and give an opportunity for making healing applications:—

R.	<i>Acidi salicylici</i>,	. . . . .	ʒi	
	<i>Alcoholis</i>,	. . . . .	f ʒiv.	M.

This is especially useful on the scalp, when, after the scales have been cleansed off by this means or by means of *spiritus saponis kalinus* (two parts of *sapo viridis* dissolved in one part of hot alcohol and filtered), used as a shampoo, an oil composed of one drachm of oil of cade to the ounce of oil of almonds or of alcohol may be well rubbed in by the aid of a soft brush. On the edge of the scalp and about the face the best ointment is that of ammoniated mercury, twenty to forty grains to the ounce.

When it is desirable to get rid of the scales and patches in the most rapid manner possible, *chrysarobin* (*chrysophanic acid*) is the best application. An ointment of half a drachm to a drachm to the ounce is very efficient, and will remove a patch in a few days, leaving a white spot of skin surrounded by a purplish areola in its place. But there are strong objections to the use of *chrysarobin*. It discolors everything with which it comes in contact, dyes the hair orange-yellow, and ruins the clothes. It cannot be used on the scalp, nor about the eyes and cheeks, because it gets up a sort of erysipelatous dermatitis there, and it cannot be trusted in the hands of most patients, because, unless used cautiously, it may inflame the skin wherever used. G. H. Fox has suggested the following solution, which is quite

effectual and saves the smearing which renders the chrysarobin ointments so annoying and disagreeable:—

R.	Chrysarobin,	ʒj	
	Ætheris et alcoholis,	aa	q. s.
	Collodii,	ʒj.	M.

Rub up the chrysarobin with a little alcohol and ether, and add the collodion. It forms a sort of emulsion, which should be shaken before using. By the aid of a camel's-hair pencil in the cork, this may be painted over the affected patches after removal of the scales. When it dries, it will not come off on the clothes, a great advantage.

Next to chrysarobin in activity comes pyrogallic acid. This may be used in ointment—a drachm to the ounce. It is not so effectual, but is much more cleanly, although it leaves a blackish stain. I think it the best local application for psoriasis. The only caution to be observed is, not to rub it over a large area, say a quarter of the surface of the person, at any one time, for fear of absorption.

The following combination may be used after the scales have been removed by a bath:—

R.	Acid. pyrogallic,	gr. xij	
	Acid. salicylic,	gr. viij	
	Collodii flexile,	fʒj.	M.

The ingredients may be dissolved in some appropriate menstruum or suspended in the collodion. A brush should be inserted in the cork for convenience in painting on. The application should extend a little beyond the patch.

Preparations of tar have been used from time immemorial in the treatment of psoriasis, but I think the remedies above mentioned are better, and they are certainly much more agreeable. When there is a good deal of itching, however, tar may be used, either as an ointment, of one to two drachms to the ounce, or in the following formula:—

R.	Saponis viridis,	
	Picis liquidæ,	
	Alcoholis,	aa ʒiv. M.

This is to be rubbed firmly into the patches, previously denuded of scales, twice daily. Hebra's modification of Wilkinson's ointment, given under Eczema, is useful.

In very severe and extensive, or universal psoriasis, baths with inunctions of bland oils and fats are better than any of the applications mentioned. Tar may be used in these cases with caution.

The prognosis of psoriasis, so far as the individual attack is concerned, is, in medium and mild cases, usually favorable. But the disease is prone to relapse, and the physician should warn his patient that, while the attack can be cured, the affection is liable to return, and that no treatment, however well directed, will surely prevent the disease from coming back. Severe cases, especially when the entire surface is covered with the disease, are often rebellious to all treatment.

Psorospermia.*—This name has been given to a number of diseases of the skin due to the development in the epidermis of certain parasites belonging to the class of sporozoæ of the sub-group of psorospermia or coccidiæ. The oviform psorospermia or coccidiæ are unicellular parasites occupying the interior of the epithelial cells of the vertebrata. They do not show any movement at any period of their evolution. Examined under the microscope they appear under the form of roundish bodies, surrounded by a refractive membrane, of double contour, resembling a cartilage cell. Their diameter varies, but is always larger than that of the epithelium cells in which they are developed. In their centre there is a globe nucleus of protoplasm with one or more nucleolar masses. This globe is separated from the walls of the cyst by a transparent band. Sometimes this protoplasm fills the cyst under the form of fine

* I am indebted for this article to my friend, Dr. J. Abbott Cantrell, Professor of Diseases of the Skin in the Philadelphia Polyclinic.

granulations; occasionally it is segmented into distinct masses. The cellule which contains the parasite is deformed; it is moulded in a certain way on the envelope of the cyst, which it has filled, and its nucleus is attached to the periphery of this cyst, between its envelope and that of the cellule.

The affections which are considered as psorospermoses are (1) *psorospermiosis vegetans folliculæ*;* (2) *Paget's Disease of the Nipple*; (3) possibly, *Molluscum contagiosum*; (4) possibly, certain varieties of *superficial epithelioma*.

Purpura (*per'-pū-ră*).—Purpura is an affection of the skin, characterized by the appearance of hemorrhagic spots of various sizes, and accompanied or not by similar hemorrhages in the mucous membranes and viscera. It may be idiopathic or symptomatic. The idiopathic form commonly presents itself in two varieties, *P. simplex* and *P. hæmorrhagica*. Purpura simplex is characterized by the appearance, in successive crops, of numerous petechial spots in the skin and visible mucous surfaces. These are usually attended with little or no constitutional disturbance, although malaise, loss of appetite, etc., may precede the outbreak of the eruption by some days. The spots come out suddenly, often in the night, and the patient finds his skin, usually the legs and about the knees, strewn with sharply-defined, pin-head to pea-sized hemorrhagic lesions. The color of the eruption, at first bright red, soon becomes purplish, and the lesions may be single and scattered, or here and there mingled in irregular patches. The only subjective symptom observed is slight itching on the appearance of the lesions; often even this is absent. Occasionally wheals, like those of urticaria, occur with the hemorrhages, and then there may be much itching. Blebs have been noticed in this form of purpura.

* See *Keratosis follicularis*.

Purpura simplex is more apt to be observed in the old than in the young. An attack may last from a fortnight to several months, the cutaneous lesions coming out in crops. The causes are often obscure; it occurs in the well-nourished as well as the debilitated. Malarial influences also have an effect in causing the disease.

The lesions of purpura simplex are so peculiar, being small hemorrhages under the skin which do not disappear on pressure, that there is usually no difficulty in making a diagnosis. The lesions may, however, be confounded with flea-bites. The puncture made by the insect in the centre of each hemorrhagic point will, however, settle the diagnosis.

There is one form of purpura simplex which is known as "purpura rheumatica," where the prodromal symptoms are more severe, and where severe rheumatic pains are felt, especially in the joints of the lower limbs. When the eruption comes out the rheumatic symptoms abate; relapses here are common; the disease may last for months, and sometimes takes on the appearance of erythema multiforme.

The second variety of idiopathic purpura, *P. hæmorrhagica*, is a much more severe disease. It begins by marked prodromal symptoms, as debility, loss of appetite, languor, headache, and feelings of general distress. The spots of eruption appear suddenly, first upon the limbs, and then spreading to other parts of the body, occurring usually in great numbers and often coalescing to form hand-sized patches. Hemorrhages from the mouth, gums, nose, stomach, bowels, and bladder, and even into the brain, may occur simultaneously and the disease may have a fatal termination. The disease may occur at all ages, and among the strong and well-nourished, as well as among the weak and ill-fed.

Purpura hæmorrhagica is liable to be confounded with scurvy, but scurvy occurs in those who have been subjected

to bad food and improper hygiene. P. hæmorrhagica comes on suddenly, scurvy comes on slowly, with tumefaction of the gums, bleeding and looseness of the teeth, etc.

The symptomatic forms of purpura are those in which the hemorrhage into the skin is a comparatively insignificant symptom of a more important disease. The specific fevers, various forms of anæmia, leucocythemia and scurvy form one group of these.* Tonsillitis is sometimes accompanied or followed by purpura. (See Le Gendre and also Joal, Sajous' *Annual of the Univ. Med. Sci.*, vol. iv, 1893, E—2.) In such cases erythema multiforme is very apt to occur as well as purpura. Another is formed of cases where the extravasation of blood into the skin is caused by the ingestion of drugs. (See *Dermatitis medicamentosa*.) A third group includes cases occurring from mechanical causes, as feeble circulation, varicose veins, thrombosis, etc. A fourth group includes all those cases in which the nervous system is primarily at fault, as tabetic purpura, purpura in connection with diseases of the central nervous system and neuralgia, etc.

In the treatment of purpura, attention must first be paid to the removal of the cause, if this can be ascertained. Nutritious diet, and above all, if the hemorrhage be extensive, perfect rest in the horizontal position, are important. In purpura simplex, ergot, iron and quinine, the mineral acids, together with frictions and cold baths, are beneficial. Purpura hæmorrhagica calls for prompt and decided treatment. In addition to perfect rest and diet in ordinary cases, tincture of the chloride of iron in doses of twenty to thirty drops, alone or with ergot and digitalis, may be given. Turpentine and acetate of lead, with opium,

* See Purpura following Syphilis, Wickham Legg. Path. Soc. Trans., 1885, p. 497.

may be administered in some cases. Oil of erigeron, in five or ten-drop doses, on sugar, every two or four hours, is highly recommended. In severe cases ergotine may be given hypodermically, one grain every four hours. Electricity has succeeded when other remedies have failed. Finney recommends ergot and belladonna at first, and bark, ammonia, and the mineral acids later.

The prognosis of all forms of purpura, except purpura hæmorrhagica, is good. The disease is apt to be stubborn to treatment, however, P. rheumatica particularly so. The latter is a treacherous disease, and the prognosis should be guarded.

Closely connected with purpura is the hemorrhagic condition, known as "bloody sweat," or "hæmatidrosis," which consists in the appearance at the outlets of the excretory ducts of the sweat glands of a reddish fluid containing blood. It is usually in small quantity and localized, and is a cutaneous hemorrhage, taking place about the sweat glands, and emptying itself through the sweat ducts. It is a very rare disease. (See *Hæmatidrosis*.)

Pustule, Malignant.—(See *Malignant Pustule*.)

Quinine Eruption.—(See *Dermatitis medicamentosa*.)

Red Gum.—(See *Miliaria*.)

Rhinophyma.—(See *Acne hypertrophica*.)

Rhus Poisoning.—(See *Dermatitis venenata*.)

Ring Worm.—(See *Tricophytosis circinata*, *T. tonsurans* and *sycosis hypogenica*.)

Rodent Ulcer.—(See *Epithelioma*.) An excellent article on this form of epithelioma is by Dubreuilh (*Ann. de Derm. et de Syph.*, 1892).

Rosacea.—(See *Acne Rosacea*.)

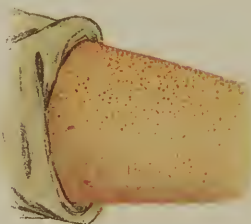
Rubella (*Rötheln*, *German Measles*).—A febrile exanthem the eruption of which is sometimes mistaken for skin eruptions of other kinds or for other exanthemata. The differ-



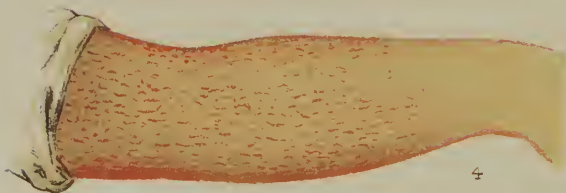
1



3



2



4

1. Variola. 2. Scarlatina. 3. Rubeola. 4. Roseola.

ential diagnosis here given will aid in distinguishing the affections.*

DIFFERENTIAL DIAGNOSIS

BETWEEN

RUBELLA (*Rötheln*).

1st stage. Invasion symptoms.

Slight languor, with headache and sometimes nausea and vomiting. In one case clonic convulsions.

J. L. Smith.

Shivering, nausea, rarely vomiting, itching, redness and pain of eyes with increased lachrymation, sneezing and discharge from nose, cough, sore throat, and hoarseness. (In addition to above.)

Aitken.

Pain in limbs, more or less. (In addition to above.)

Liveing.

Sore throat is a most constant symptom, and is a characteristic feature of the disease, occurring in the slightest and most gentle cases.

Patterson.

There is usually sore throat.

Dunlap.

In all cases there is sore throat.

Murchison.

DURATION.

Eruption appears on 1st or 2d day; usually on 2d day.

Liveing, Murchison.

Appears on 3d or 4th day.

Aitken, Roberts.

Appears on 5th day.

Fox.

Some hours, or a day, or even longer duration.

J. L. Smith.

SCARLATINA.

1st stage. Invasion symptoms.

Chill, vomiting, epistaxis. The fever, increased heat of skin, headache, prostration, and general malaise vary much in intensity, not including cases of unusual severity.

MEASLES.

1st stage. Invasion symptoms.

Lassitude, shivering, fever, catarrh. The mucous membrane of the eyes, throat, windpipe, and bronchial tubes are much affected. Eyes watery, lids puffy; dry cough; hoarseness and difficulty in breathing; drowsiness; great heat of skin; frequent and hard pulse.

DURATION.

Average duration, 24 hours. Eruption usually appears on 2d day (*i. e.*, at any hour after 24th hour of sickness). Exceptionally, it appears, on the one hand, a few hours after the attack, and, on the other hand, it may be delayed 1, 2, or 3 days or more, after the time when it usually appears.

Flint.

DURATION.

Eruption appears on 4th day—seldom earlier—often later.

Tanner.

* This table is taken from an article on the subject by Dr. J. H. Etheridge. He remarks that the salient points of difference between *rötheln* and the two diseases with which it is liable to be confounded are: 1st. *The temperature.* 2d. *In the mode of appearance of the eruption.* 3d. *The characteristic elevation and heightened color of the centre of the patches.* 4th. *The manner of desquamation.*

RUBELLA (*Rötheln*).

2d stage. Stage of eruption.

MODE OF APPEARANCE.

The eruption appears all at once over the whole body; is sudden and general; is less marked on the limbs than trunk. Aitken, Roberts, Fox, Copeland.

May first appear upon the back, upon the chest or neck, upon the cheek or upon the forehead; travels downward.

J. L. Smith.

CHARACTER OF ERUPTION.

At first like measles; minute dots, which rapidly assume the appearance of large, irregular-shaped patches, varying from 3-cent piece to 25-cent piece in size. *Aitken, Liveing, Murchison, Roberts.*

These patches, quickly become raised above the surrounding skin, especially toward the centre of the patch, and are of a darker color at the centres.

Aitken, Roberts, Fox.

These patches shade off in color toward the margins till the natural color is reached between the patches.

Aitken.

The more severe the case the more is the centre of the patches elevated above the surrounding skin. *Aitken*

After a time the patches may all unite, and then the skin becomes to the naked eye of a uniform red color, closely resembling scarlet fever.

Murchison.

In two cases out of five this uniform red color was noticed.

Liveing.

DURATION.

Eruption disappeared in 3 to 4 days.

Dunlap.

In proportion to severity; 4 to 10 days.

Murchison, Aitken.

From 7 to 10 days.

Liveing.

SCARLATINA.

2d stage. Stage of eruption.

MODE OF APPEARANCE.

Usually appears on body and limbs before it comes out on face and neck. In exceptional cases it appears first on latter situations.

CHARACTER OF ERUPTION.

First appearance is in form of dots or specks. These coalesce, forming irregularly distributed patches, which vary in shape and size, having irregular or serrated margins. In some cases the whole cutaneous surface is covered with efflorescence, presenting the appearance of a boiled lobster.

Flint.

Amount of eruption varies very greatly, varying all the way from slightest possible amount to a bright scarlet hue of the entire surface of the body. No elevation of skin answering to "centre of patches" is ever noticed. No elevation farther than what we call "goose skin" is ever seen.

DURATION.

Eruption reaches its maximum of intensity and diffusion on third day after its first appearance. This stage varies from four to six days. Eruption usually gone at end of 5th day. In some cases it persists a day or two longer.

MEASLES.

2d stage. Stage of eruption.

MODE OF APPEARANCE.

First appears on forehead and face, and gradually extends down over body, legs, and arms.

CHARACTER OF ERUPTION.

Comes out in small circular dots like flea-bites. These dots run together and form blotches of a raspberry color, and the latter are very prone to assume a crescentic or horseshoe shape, being slightly elevated above the surrounding skin.

Eruption sometimes diffused over whole body in a confluent form, and it is of a dull, deep red color, offering a contrast to the crimson or scarlet redness of scarlet fever.

Flint.

DURATION.

Begins to fade about the fourth day, in the same order in which it came out.

RUBELLA (*Rötheln*).

SCARLATINA.

MEASLES.

2d stage. Stage of eruption.

2d stage. Stage of eruption.

2d stage. Stage of eruption.

DURATION.

DURATION.

DURATION.

In no case (of more than 21 reported cases) lasting more than 8 hours.

Steiner, of Prague.

Usually fades in 4 or 5 days.

Roberts.

Fades out 2d or 3d day.

Fox.

Commonly disappeared the 4th day.

J. Lewis Smith.

ACCOMPANIMENTS.

ACCOMPANIMENTS.

ACCOMPANIMENTS.

Sore throat is always a prominent and troublesome symptom in this stage. This fact is particularly emphasized by *Aitken*, *Liveing*, *Murchison*, *Patterson*, *Copeland*.

In severe cases the hoarseness is so great as frequently to cause entire loss of voice. * * * * Swelling accompanies this hoarseness, and is so great that there is a total inability to swallow even the slightest portion of fluid, which generally regurgitates by the nose.

Aitken.

Mild inflammation of mucous membrane of throat, mouth, nose, and eyes.

J. L. Smith.

There is a combination of scarlatinous angina (sore throat) and tongue, with morbillous (measles) catarrh.

Murchison.

The temperature being always highest on first day of attack, not exceeding 102°, next day falling to 100°, and getting normal on 5th day.

Fox.

The temperature nearly always subfebrile (99.5 to 100.4°), sometimes febrile (101.3 to 102.2°).

Wunderlich.

There is scarcely any constitutional disturbance, and the temperature is only slightly, if at all, raised above the normal standard.

Dunlap.

Slight, if any, rise in temperature.

Steiner.

Febrile movement, constantly mild in uncomplicated cases, ranging from 98° to 100°.

J. L. Smith.

Very numerous. Many of them present in a certain proportion of cases, then again they are all wanting. They vary widely in their dangerousness, some being surely fatal, others being quite innocuous. There may be sore throat, varying from a little redness to a destructive degree of inflammation. Watery blebs or blisters sometimes appear on the skin. Fever rather increases after the eruption. Temperature may reach 105.6°, or even a higher point. It usually remains continuously high during the eruption (*Wunderlich*), and is thus well distinguished from those eruptions with which, on account of other symptoms, it is most easily confounded, and more particularly measles and *Rötheln*.

Pulse may go to 160 or even 170.

No appetite. Sometimes vomiting, constipation in some cases, diarrhoea in others; thirst urgent; delirium common; integument slightly swollen all over, as is shown when patient tries to close the hand.

Irritability of the mucous membrane all over the body seems to be a characteristic of measles. Hence bronchitis is almost the rule in this stage.

Redness of the eyes is a constant symptom, amounting to inflammation in some cases.

Temperature for one day in this stage in uncomplicated cases will rise to 106°. It then rapidly subsides to the normal standard, reaching it in 48 hours.

RUBELLA (<i>Rötheln</i>).	SCARLATINA.	MEASLES.
<i>3d stage. Desquamation.</i>	<i>3d stage. Desquamation.</i>	<i>3d stage. Desquamation.</i>
CHARACTER OF THE SCALES.	CHARACTER OF THE SCALES.	CHARACTER OF THE SCALES.
Minute portions of cuticle, like <i>fine bran</i> . Always begins toward centre of eruptive patch and gradually extends to the circumference. <i>Roberts, Aitken, Murchison, Living, Patterson, Dunlap.</i> Scales on hands and feet are larger, but never reach the size of those of scarlet fever <i>Patterson.</i>	Comes off in branny scales and in large patches, occasionally epidermis of hands is detached entire and may be stripped off like a glove. This is true also of the feet. <i>Flint.</i> Sometimes several successive desquamations occur. Frequently accompanied with itching, which in some cases is excessive.	Always in branny scales, not in patches or flakes.
DURATION.	DURATION.	DURATION.
5 days to 12 or 15 days.	Desquamation usually completed in 10 to 12 days; exceptionally it continues for several weeks.	From 4 to 8 days.

Rhinoscleroma.—(Called by Bésnier *Geroscleroma*.) A very rare disease, affecting chiefly the nose. The alæ nasi and point become hard and firm, and at first much enlarged. Soon after, brownish-red, isolated, hard, flat tubercles appear, growing into diffuse tumors, first on the outer skin, then on the mucous membrane within the nose, and also outside, near the inner canthus of the eye, and on the upper lip.

The nose generally becomes of ivory hardness and immovable, with a normal or brownish-red color, smooth, or at times uneven of surface. It is painful to the touch.

Marked enlargement and deformity result, and cracks and rhagades form about the corners of the alæ. The nostrils become gradually closed by the growth.

The disease may spread back into the posterior nares, the pharynx, uvula, tonsils, etc., becoming involved. It may begin in the nasal passages or throat.

The disease is incurable. It is to be carefully distinguished from similar syphilitic affections which may closely resemble it, but which are amenable to proper treatment.

Rupia.—(See *Syphilis of the Skin*.)

Salicylic Acid, Eruptions from.—(See *Dermatitis medicamentosa*.)

Sarcoma of the Skin appears in the form of shot, pea, hazel-nut, or larger sized, variously shaped, discrete, non-pigmented or pigmented tubercles, or tumors. Non-pigmented tumors, occurring as single or multiple growths upon the various regions, represent, perhaps, the commonest manifestations of the disease. They are smooth, firm, elastic, not markedly painful upon pressure; in color, reddish, violaceous, or brownish red. It is said that the multiple pigmented sarcoma always appears first upon the soles and backs of the feet. The disease may be mistaken for the papular or for the gummatous syphiloderm, lupus and lepra. It occurs generally toward middle age. The disease is malignant, usually proving fatal in the course of a few years. Recently, hypodermic injections of Fowler's solution, in the dose of two drops, gradually increased to nine drops, diluted with two parts distilled water, daily, have been used successfully. This is worth a trial, for no other treatment avails.

Scabies.—Scabies, or the itch, is a contagious, animal parasitic disease, a sort of eczema or dermatitis, caused by the presence of an animalcule, the itch mite, in the skin. It is highly contagious. The female itch mite no sooner finds itself on the skin than it begins the work of burrowing, forming, just below the surface of the skin, a burrow in which the eggs are laid, the fæces deposited, and in which the itch mite lives. The male is said never to enter the skin, but to live upon the surface. After a time, a certain number of young itch mites are hatched forth, all of which begin at once to take care of themselves, and to burrow. Thus, the early symptoms of the disease are caused by the irritating presence of these parasites at various points, and characterized by the formation of minute, more or less inflammatory, puncta, papules, and vesicles. Later, the burrows can be seen in the shape of more or less tortuous, beaded, yellowish or blackish lines, not thicker than a

thread, and one-eighth to one-quarter of an inch in length. Later still, scratch marks, blood crusts, etc., show themselves, and the disease spreads day by day.

The affection usually begins about the hands, and especially about the fingers. The wrists, the penis in men, and in women the mammæ, are next involved. The other softer and more protected parts of the body are then invaded. The anterior fold of the axillæ and the buttocks are very apt to be attacked. The lower limbs are generally spared, excepting the feet in children.

Itching, oftentimes very severe, is a marked feature of the disease, increasing in severity with its extension. It is worse at night, when the patient is warm in bed.

The cause of scabies lies, as has been said, in the irritating presence of the itch mite in the skin. It is so contagious that it may be conveyed by bedding or clothes, or even by a shake of the hand. It is not a common disease in this country, occurring only in the proportion of one per cent. among all skin diseases, being led in frequency by eczema, thirty-one per cent.; syphilis, ten per cent.; acne, seven per cent.; psoriasis, between three and four per cent.; and various others. In Europe, on the other hand, the unwashed populations furnish a larger proportion of scabies than of any other skin disease. The recent increased immigration of Italians, Poles, etc., has increased the proportion of scabies in public clinics in our large cities.

The diagnosis of scabies is, as a rule, not difficult. The presence of the burrow is sufficient to decide the matter, and this should be looked for in every suspected case. The mite itself may usually be extracted from the minute vesicle at the end of the burrow by the aid of the point of a pin or needle, but failure to capture it need not be regarded as negative evidence in the diagnosis, for it requires a good light, sharp eyes, and some dexterity to succeed. The burrows must not be confounded with irregular lines of epi-

dermis filled with dust or dirt. The resemblance is, at first sight, strong. In the majority of cases the burrows are only to be detected upon the sides of the fingers, or on the flexor surface of the wrists. The regions of the body mentioned as the favorite seat of scabies must be taken into consideration in making the diagnosis, and finally, it must be remembered that other affections may be concurrent with scabies upon the body.

Once recognized, the disease is, in most cases, easily cured. The great point is to use the applications in such a manner that the parasite may be destroyed without undue irritation of the skin, and, indeed, with relief to this condition. When the case is recent, a cure can be rapidly and easily effected, but when of old standing there is apt to be a good deal of eczema in connection with the scabies, and after the parasite is destroyed the eczema remains for treatment. The following ointment seems to cure the eczema while killing the itch mite :—

R.	Pulv. naphthol,	℥j	
	Ung. adipis,	℥j.	M.

On coarse skins *sapo viridis* may be used with the naphthol :—

R.	Pulv. naphthol,	℥ ^{iss}	
	Saponis viridis,	℥ ^v	
	Cretæ alb. pulv.,	℥j	
	Axungiæ,	℥ ^x .	M.

I have used one or another of these prescriptions almost exclusively, for several years past, and prefer them above all others. Sulphur is the old standard remedy, and may be used in the form of ointment, ranging in strength from one to four drachms to the ounce, according to the tenderness of the skin. The modified Wilkinson's ointment given under Eczema is also useful.

The treatment, whatever it be, should be preceded by a hot bath with soft soap, after which the ointment should

be rubbed in, and allowed to remain. After seven days of treatment, an inunction being made daily, and the under-clothing remaining unchanged, the patient should bathe and report for inspection. Too vigorous a course of treatment may give rise to a dermatitis, which will require weeks to cure.

The prognosis of scabies is always favorable; a few weeks will suffice in average cases, but the irritation of the skin requires longer treatment to overcome.

The "army itch," frequently encountered during and after the late war, was a severe form of scabies.

Sclerema Neonatorum.—This rare affection is in no way connected with scleroderma, although the latter was at one time called "sclerema of adults." It usually shows itself in the first days of extra-uterine life, having in all probability begun in foetal life.

The first marked symptoms are commonly observed from the third to the sixth day after birth, when the lower extremities are seen to show considerable areas of shining, tense, white skin, sometimes tinged with red, or of a dirty-brown or yellowish color. The tissues are œdematous, pitting on pressure with the finger, while the skin is so much thickened that it cannot be pinched into folds between the thumb and fingers. Beginning in the calf, the disease soon extends to the thighs, spreads over the abdomen, up the trunk, involves the head and upper extremities, and, in fine, after a brief period (three hours to three days) invades the entire body. Of course, we can know nothing of the subjective symptoms, but the rapid fall in body temperature, the frigidity of the affected parts, and the general depression of functional activity, point to a serious general condition.

The infant's bodily movements are imperfect and restrained; it lies numb and stiff, usually with closed eyes and wrapped in lethargic slumber; it declines food, partly

on account of mental hebetude and partly because of the difficulty of making the movements of the mouth necessary to nursing. The heart is weak, and the pulse is rapid and sometimes almost imperceptible. The respirations are irregular and shallow, with occasional râles. The patient occasionally utters a complaining whine. The urine and stools are diminished in quantity.

The symptoms mentioned usually increase in severity with continually falling bodily temperature and increasing weakness, until death ends the scene at the end of from four to ten days.

Sclerema neonatorum is almost invariably fatal, though recovery has been noted in a few cases where the disease was not extensive. The cause of the disease seems to lie in an extensive implication of the blood-vessels. Atelectasis of the lungs, congenital disease of the heart, or other constitutional anomalies, have been brought forward as explanatory of the origin of the disease. Surroundings and pre-natal conditions of an unfavorable hygienic character—want, privation, etc.—appear to have some influence in the causation of the disease.

Anatomical examination shows deep involvement of all strata of the cutaneous envelope. The widespread infiltration of the subcutaneous tissues allows the easy separation of these layers from the deeper layers of muscles and the fasciæ. On section, a yellowish-white, serous fluid, mostly composed of oil globules, exudes. Of the internal organs, the lungs and kidneys are usually hyperæmic, while the brain and the serous membranes are usually œdematous. The brief duration of the affection, however, usually allows only the earlier stages of these changes to be observed.

The treatment of sclerema neonatorum is of a roborant and restorative nature, and should be undertaken at the earliest possible moment. Rubbing with hot blankets, etc., and the internal administration of restoratives may

relieve the patient, and, if begun in time, may work a cure. The affection is very rare. I do not know of any case having been reported in this country. (See also *Edema of Newborn Infants*.)

Scleroderma.—An affection of the skin chiefly characterized by changes in the color and density of the integument, and in some cases accompanied by marked deformity.

Two varieties are usually described, *Scleroderma diffusa* and *Scleroderma localis*.

Scleroderma Diffusa.—This is the affection described first, under the name of *sclérémie des adultes*, by Alibert, in 1817. The affection occurs most commonly in women and in adult life. No previous ailment seems to exercise a predisposing influence, unless it be rheumatism. The immediate cause in many cases has been exposure to dampness and cold.

The induration, which is so marked a symptom of the affection under consideration, is variously described in different cases, and writers seem to vie with one another in their attempts to express vividly the peculiar sensations offered to the sight and touch.

In some cases the skin is described as being of stony or board-like hardness, or feeling like that of a frozen corpse, without the sensation of cold. In other cases it is compared to brawn or leather. Adherence of the skin to subjacent tissue is not uncommon—"hide bound," or "perfectly immovable," are the expressions used. In a case coming under my own personal observation, the skin over the forearms was so bound down that the limbs seemed as if carved out of wood. The underlying muscles, particularly those of the limbs, are generally more or less wasted.

One of the most distinctive characteristics of this variety of scleroderma is symmetry and diffusion as distinguished from localization. Commencing, as in most of the cases reported, on the back of the neck, the disease spreads

equally on either side of the median line; or, when it begins in the limbs, both are usually attacked at once.

The surface covered is almost invariably large; those cases reported in which the disease seems to tend toward localization, are usually to be regarded as, in all probability, belonging to the other variety of the disease.

A marked characteristic of this variety of scleroderma is that no distinct boundary exists to the affected areas; they seem to melt imperceptibly into the surrounding skin.

The color of the affected skin varies much in different cases. In many cases pigmentation exists to various degrees, while in other cases the skin either retains its normal tint, or becomes pale-yellowish or waxy in color. A curious fact is that the pigmentation seems much deeper in the immediate neighborhood of the sebaceous follicles. In a certain number of cases, it is said that spots or patches of pigmentation at various points precede and presage the induration of the skin in these localities. This, however, is more likely to occur in the circumscribed and localized form of scleroderma.

Neither fever nor local inflammatory reaction of any kind ushers in, accompanies, or follows the appearance of the disease in any typical case. Œdema is rarely, if ever, observed in diffuse scleroderma. Occasionally swelling of the hands or feet has been observed, as a result of mechanical interference with the circulation.

The rapidity with which the disease attacks and spreads over the skin varies in different cases. In some, large areas of skin become indurated in a very short time; in others, the onset is slow and insidious.

In no case is there any marked elevation of the indurated skin above the level of the surrounding and unaffected parts, though tubercular elevations have occasionally been observed. Where the tightened skin plays over prominent

bony parts, as the knuckles, a tendency to ulceration is often observed.

Cutaneous sensibility in most cases remains unaltered. The appendages to the skin, the glands and hair, are rarely affected.

Scleroderma diffusa runs a very chronic course; many cases may be under observation for years, with little or no change apparent, and this under the persistent employment of decided and varied treatment. The existence of scleroderma does not necessarily exclude that of other skin diseases; acne, comedo, and eczema have been observed simultaneously, and in the same localities.

Scleroderma diffusa is not in itself a fatal affection. In the few cases in which death has occurred while the patient has been under observation, it has usually occurred from some intercurrent disease, totally unconnected with the scleroderma. It is true that, in one case recorded, death was hastened by the extremely inflexible condition of the facial integument, which interfered greatly with deglutition, while in some others respiration was much impeded through immobility of the thoracic walls.

The pathological anatomy of scleroderma diffusa is simply that of a hyperplasia of the fibrous element of the papillary layer and corium, with decrease of subcutaneous fat and increase in pigment deposit.

Scleroderma Localis (Morphœa).—The symptoms and course of this disease, or form of disease, are very different from those of scleroderma diffusa. The affection is sometimes preceded by nervous symptoms, neuralgic pains, rheumatism, etc. At other times there are no general prodromes. The advent of the local symptoms is usually insidious, so that they are not often observed until the disease has made considerable progress. The most prominent skin symptoms are the appearance of parchment-like patches, with sclerotic striæ. In a typical case described

by Bésnier the patches were irregular in shape, usually elongated in the direction of the axis of the body and members, isolated or confluent, sometimes symmetric, sometimes asymmetric. At first sight these patches can be distinguished from the surrounding skin only by their deeper color, their finely striated surface, slightly depressed beneath the level of the surrounding skin, and particularly by a lilac border composed of fine blood-vessels.

To the touch the affected patches seem slightly rough, dry, parchment-like, and superficially indurated, so that the skin can be pinched up only in thick folds. Sensation is in no way altered.

The striated patches are sometimes fine and diffuse, and hard to recognize, at other times they are united, forming large patches of convergent stripes.

The localized patches of scleroderma may be observed in any part of the body, but are more common on the trunk. The cases which have come under my observation have presented only the parchment patches (*morphœa*) with lilac areola, and have been observed about the clavicles and on the face.

In addition to the more characteristic patches above described, keloidal lesions and areas of pigmentation are observed at times. Occasionally, also, ecchymoses and phlyctenular lesions occur, and hyperæsthetic points, but these are usually evanescent. In some cases deep-seated and superficial neuralgic pains precede and accompany the appearance of the lesions, occurring in attacks, often nocturnal. In other cases no such symptoms are present.

Accompanying the skin symptoms, rheumatic pains with articular symptoms, anchyloses, and even osseous degenerations, have been reported. The hands and fingers, in particular, are said to become involved. The disease runs a very chronic course, and but few cases have been followed through their entire evolution. It will be seen from the

above description that scleroderma, whether of the diffuse or localized form, presents itself in so many varieties as to make it difficult of definition. As to the nature of the localized form, all the evidence points toward a tropho-neurotic origin.

As regards treatment, Goldzieher (*Berlin. Dermatol. Gesellschaft.*, 1893; Sajous' *Annual*, 1894, v. iv, A—35) has used salt water baths and massage with two per cent. salicylic acid vaselin ointment successfully. Lewin uses electricity with good effect.

Crocker ("Diseases of the Skin," 2d Am. Ed., Phila., 1893) says that the indications are, to guard the patient against cold and so to prevent the aggravation which nearly always ensues after exposure to chilly influences; secondly, to improve the general nutrition; and, thirdly, to restore the circulation in the ischæmic area.

Cod-liver oil, ferruginous and oil tonics are most important. Care must be bestowed on the digestive organs. Shampooing after or without the Turkish bath when this cannot be obtained, is useful. Also galvanism.

Scrofuloderma.—There are a number of skin diseases so closely connected with the condition of the system called scrofulous as to be properly designated *scrofulo-dermata*. Of these, one of the commonest is that which begins in one or more of the superficial lymphatic glands, especially under the jaw, about the neck and clavicular region. The glands become enlarged and the process extends to the skin overlying them, which becomes red and infiltrated. Finally a cold abscess forms, and is discharged through the skin, and an ulcer of slow progress, with undermined violaceous border results.

Bésnier calls scrofulous nodes, especially when they occur superficially, "scrofulous gummata," on account of their resemblance to syphilitic gummata. The most superficial of these gummata begins as a small infiltration or

node in the skin, of a livid red color. Increasing in size, slowly at first, and later more rapidly, it sometimes extends in one or more directions, involving the entire skin and softening at one or more points to form small ulcers, with burrowing sinuses extending from one to another. The discharge from these ulcers is usually sero-purulent or sanious, and occasionally bloody, and the skin may be undermined by numerous communicating galleries. Occasionally the disease takes on a diffuse, infiltrating form, spreading in an irregular patch over the skin, involving its entire surface, and giving rise to serpiginous, shallow ulcers.

The scrofulous ulcer never shows any disposition to heal. It may look as if it were on the very verge of cicatrization, but it does not actually scar over, or, if it does, a week or two later the cicatrix may open in one place while forming in another.

In addition to the localities above mentioned, this form of scrofuloderma may occur over the cap of the shoulder, in the groin, and elsewhere. It is generally accompanied by other signs of the scrofulous condition, by old scars, etc.

This form of scrofuloderma is to be distinguished from lupus vulgaris and from syphilis by the concomitant general symptoms of scrofulosis and by the peculiar features of the lesions, which differ materially from those of lupus and syphilis. The characters of the primary lesions, the form of the ulcers and their course, and the amount of crusting differ materially. Where the diagnosis between scrofuloderma and syphilis is difficult, the history in some cases will aid.

Another and rarer form of scrofuloderma is characterized by the formation of papillary, wart-like, or fungous growths of a pale, bright, dusky, or violaceous red color. The surface of these growths soon ulcerates, with a thin discharge and some crusting. These lesions are apt to

occur upon the backs of the hands, and may extend to such depth as to lead to bone changes. The course of this form of scrofuloderma is exceedingly chronic.

A fourth variety of scrofuloderma may be referred to, which shows itself in the form of small, hard, scattered, flat papules, with a raised violaceous areola. The lesions may occur upon any part of the body, but are usually met with upon the forearms, legs, and face. At first they look like the pustular syphiloderm, but crust over after some weeks, leaving a depressed pit-like cavity, of a size to receive the head of a pin, in the lesion. Finally the lesion disappears, leaving a punched-out scar like that of small-pox. This form of scrofuloderma is chronic to an extreme degree. New lesions form while the old ones are cicatrizing; and while the affection does not give rise to any pain or other annoying sensation, it is very rebellious to treatment.*

The treatment of scrofuloderma is both general and local. Cod-liver oil, iodine—usually in the form of iodide of potassium, or of Blancard's pills of iodide of iron—and iron alone, are most frequently serviceable. Milton has reported excellent results from the administration of calomel or gray powder, two or three times a week at bedtime, for a fortnight, with a saline every morning, so as to produce a daily action of the bowels. Then the mercurial is suspended for from a fortnight to a month, the saline being continued. If the appetite fails, bitters and mineral acids are to be given. Locally a mild zinc ointment is applied. Milton lauds this treatment as curing where all else fails.

* All these forms of scrofuloderma are forms of tuberculosis of the skin, and all of them are due to and contain the bacillus tuberculosis. A further discussion of the subject will be found under Tuberculosis of the Skin, but I have thought well to leave this article untouched, as the subject is viewed here from a slightly different clinical standpoint; the present article representing the result of my own observation, while the more recent one on tuberculosis of the skin is largely a compilation, although corrected by my own experience.

Locally the ulcers are to be treated, as a general thing, with stimulating ointments, preferably those containing mercury. Ointments and powders of iodoform are also useful. Tincture of iron and chlorinated soda solution may also be used. Where the disease is extensive, scraping with the curette or sharp spoon, to remove the morbid tissue, as in lupus, is the quickest method.

Scurvy, Land.—(See *Purpura*.)

Sebaceous Cyst, or “Wen,” as it is popularly called, appears as a variously-sized, firm or soft, roundish tumor, seated in the skin or subcutaneous connective tissue. The skin covering the tumor is natural in color, or whitish, from stretching. The tumors may occur singly or in great numbers, and vary in size from that of a pea to a walnut or larger. They are usually firm, but sometimes doughy, and are generally freely movable and painless. Their usual seat is upon the scalp, face, back, and scrotum, though they may be met with anywhere, even on the soles of the foot. They may last for years unchanged, but sometimes break down and ulcerate. They may degenerate into epithelioma in old persons. Some sebaceous cysts are flat, with a minute hole in the centre; others tend to rise and become semi-globular. The latter are those commonly found on the scalp, where they are devoid of hair.

The contents of a sebaceous cyst may be milky or cheesy in consistence, and are often decomposed and fetid. The tumors are, in fact, nothing more than enormously distended sebaceous ducts and glands, the walls of which have become hypertrophied until they form a tough sac.

The treatment of sebaceous cyst is excision. The cyst should be carefully dissected out, as otherwise the disease is apt to recur.

Seborrhœa.—Seborrhœa is a disease of the sebaceous glands of the skin, characterized by an increase in the quantity of the sebum poured out, and also, in most cases,

by an alteration in quality of the secretion. There are two varieties, *S. oleosa* and *S. sicca*.

Seborrhœa oleosa appears in the form of an oily coating upon the skin, giving it an unctuous and greasy feel. Its most common seat is on the scalp and about the face, particularly the nose and forehead, where it appears as a greasy coating, containing more or less dust and dirt, and looking as though the skin had been smeared with dirty ointment. In the scalp it collects on the hair, giving it a dark, limp look, as if it had been freely oiled, or when the scalp is bald it looks as if oil had been poured over it.

Seborrhœa sicca, or dry seborrhœa, occurs in infants as the *vernix caseosa* or smegma of the newborn. Here it is almost physiological, and is usually soon removed. If it remain, it becomes a diseased condition, and as such is often seen on the scalp. Dry seborrhœa shows itself on both the hairy and non-hairy portions of the body, as a more or less greasy mass of scales, of a dirty, yellowish color, and somewhat adherent to the skin. On the scalp, these masses are larger and oilier, tending to cling to the skin in thick plates, and leaving, when picked off, a smooth, grayish, moist or oily surface beneath. In old persons the scalp, and sometimes the region of the beard, is covered to a greater or less extent, with a brown, adherent, greasy coating, which is essentially seborrhœic in character.

Seborrhœa sicca of the scalp, like pityriasis, with which it is sometimes confounded (see *Pityriasis simplex capitis*), is sometimes followed in the young by premature baldness. If taken in time, however, baldness from this cause can be prevented, and it is desirable in all cases to remove the seborrhœic condition, even if it gives rise to little or no annoyance.

Seborrhœa of the foreskin and glans penis is an abnormal flow of the normal secretion of this part, known as *smegma preputii*. If unattended to, it leads to balanitis,

from the irritation of its rapidly decomposing sebaceous products.

Seborrhœa is induced by a variety of causes, prominent among which is the chlorotic or anæmic state. It is more apt to occur about puberty, or in early adult age. It may occur in persons otherwise healthy. In such cases it is usually curable by local measures.

The diagnosis of seborrhœa is usually not a matter of much difficulty; the evidently sebaceous character of the lesions pointing out its nature with sufficient certainty.

The treatment of seborrhœa should usually be both constitutional and local. Fresh air and exercise, especially in the case of young women, is to be insisted upon. Attention should also be paid to diet. The history should be looked into, and any functional irregularities corrected when possible. Success in treatment often depends upon ascertaining and meeting the exciting cause in the individual. Cod-liver oil, iron, and arsenic are the most generally useful remedies. The following is a useful prescription:—

R. Tinct. ferri chlor.,
 Acid. phosphoric. dil., f ℥j
 Syrupi limonis, f ℥ij. M.
 SIG.—Half a teaspoonful to a teaspoonful, in a wineglass of water,
 three times a day.

Arsenic is best given in the form of Fowler's solution, in four-minim doses at first, gradually increased until the disease begins to disappear, or until the limit of tolerance is reached. It should never be prescribed to be taken in drops, but always in combination with some adjuvant. The following is an excellent formula:—

R. Liq. potas. arsenit., ℥ij
 Vini ferri, ad . . . f ℥iv. M.
 SIG.—Teaspoonful after meals, in water.

The local treatment of seborrhœa is very important. In seborrhœa of the scalp the scales and crusts must first be

removed. If hard and caked, as is sometimes the case in old people, the scalp should be soaked in oil over night. Hot water and castile soap will then remove the softened crusts, or, if this should fail, the alcoholic solution of *sapo viridis* may be employed. A teaspoonful of this (see *Spiritus saponis kalinus*) may be applied to the scalp with a sponge and a considerable quantity of warm water added, so as to make a lather. After vigorously shampooing the scalp for a few minutes, the soapy matters are to be washed away with an abundance of clear, warm water, the scalp dried quickly with a soft towel, and it is ready for the application of the more strictly remedial agents. These should be in the form of oils, if the hair is at all thick, because ointments are so apt to stick the hairs together and make a mess. The sort of application to be made will depend upon the condition of the skin. Generally the scalp will bear more stimulating applications. Of these carbolic acid is one of the most efficient, as in the following combination :—

R.	Acidi carbolici,	℥j-f℥ss	
	Ol. ricini,	℥ij	
	Ol. limonis,	℥j	
	Aquæ cologniensis,	℥ij.	M.
SIG.—Apply after washing.			

When there is little hair upon the scalp, the following ointment may be used :—

R.	Sulphuris præcipitat.,	℥ss	
	Ung. petrolii,	℥iv.	M.
SIG.—A small quantity to be rubbed in, once a day.			

This preparation is also useful in seborrhœa about the body.

Another preparation useful about both scalp and body, especially in *S. oleosa*, is this :—

R.	Acid. tannic.,	℥ss-j	
	Ung. petrolii,	℥j.	M.

Mercurials are sometimes of value. Either the red oxide

of mercury, ten to twenty grains to the ounce, or the ointment of nitrate of mercury, one to three drachms to the ounce of vaseline, may be employed. In severe and stubborn cases Vidal uses multiple scarifications with the view of cicatrizing the enlarged oil glands.

The prognosis of seborrhœa will depend upon the duration and extent of the disease and upon the patient's general health. Dry seborrhœa can generally be gotten well, under proper treatment, in a reasonably short time. But when in the scalp and mixed with more or less pityriasis, the prognosis is not so favorable. Premature baldness may follow neglected seborrhœa. If the hair has already begun to fall out a cautious prognosis must be given. Even if the most active treatment is followed out there is little hope of bringing back the hair, although its fall may be arrested.*

Shingles.—(See *Herpes zoster*.)

Smegma.—(See *Seborrhœa*.)

Spiritus Saponis Kalinus.—A solution of two parts sapo viridis in one part alcohol, made by the aid of heat, filtered and scented with oil of lavender.

Stigmata.—(See *Feigned Diseases of the Skin*.)

Stomatitis, Herpetic, of Infants.—Herpetic stomatitis is an affection of the buccal mucous membrane characterized by the formation, in the mouth, of small, rounded vesicles, often grouped, rapidly becoming eroded, and finally coalescing to form a roundish erosion, with polycyclic or irregular outlines, with a yellowish, pseudo-membranous base. Ordinarily the buccal eruption is accompanied by a pharyngeal or labial herpes, or both.

The affection begins with slight dryness of the mouth, with some slight burning sensation, more or less limited to a single locality, together with a considerable excess of

* Many of the forms of Seborrhœa described above are now included under Eczema Seborrhœicum, *q. v.*

salivary secretion. There is a certain amount of feverishness, loss of appetite, and coated tongue and pain, or at least discomfort in mastication, so that infants often refuse to nurse at the breast or to take the bottle. When the affection extends to the pharynx deglutition becomes painful.

The submaxillary and cervical glands are sometimes swollen and tender, or slightly painful. This swelling may persist for a long time after the stomatitis has disappeared. The breath is often fœtid as in ulcero-membranous stomatitis.

On examination the infant's mouth is found more or less inflamed. The mucous membrane is red and puffy, the gums are swollen and red, the tongue coated in the centre and red at the tip and borders. The papillæ are most prominent. The mucous membrane of the lips and of the buccal surface is also, at times, congested and swollen. In some cases the general buccal mucous membrane remains unaffected while showing the characteristic lesions of herpes at a certain point or points.

The herpetic eruption begins by the appearance of minute, raised vesicles, none larger than a pin's head. Later these break down into erosions or ulcers, irregular, or roundish and growing, as large as a split pea, or larger, by coalescence into a polycyclic form. These erosions are soon covered with an adherent, pearly, opaline coating, later sometimes yellowish.

Herpes of this form usually first attacks the internal surface of the lips, especially the lower lip, and is apt to be accompanied by a group of clear and limpid vesicles, on the corresponding external surface, which soon dry and give place to blackish crusts.

Upon the anterior half arches and velum of the palate similar lesions to those on the inside of the lips are often simultaneously observed, together with, occasionally,

patches of false membrane which might be mistaken for diphtheritic false membrane were it not for the presence of the buccal lesions and the labial herpes.

Stomatitis herpetica runs a rapid course. The lesions remain in statu quo for from three to five days, and then shrink and disappear.

The affection occurs during early dentition, and among poorly nourished infants. It is apt to be a sequela of roseola, or of whooping cough, etc. In some cases the affection tends to relapse, and in rare cases to take on deep ulcerative action, but in general its course is benign.

Microscopic examination of the pseudo-membrane covering these herpetic lesions shows the presence of numerous micro-organisms, among which are always found the streptococcus and the staphylococcus pyogenes albus and aureus. The curious fact is noted by Lebon (*Thèse de Paris*, 1893) that a child, exposed to contagion from two brothers suffering from pneumonia, was attacked, not by that disease but by herpetic angina. No specific organism has, however, been isolated in this affection.

Poulain (*Thèse de Paris*, 1892) gives the following scheme of the various forms of stomatitis:—

I. STOMATITIS, PROPERLY SO- CALLED, . . .	{	(A.) Spontaneous idiopathic stomatitides,	{	(a) Erythematous Stomatitis.
			{	(b) Pultaceous.
			{	(c) Creamy, or "Muguet."
			{	(d) Aphthous.
			{	(e) Impetiginous.
			{	(f) Ulcero-membranous.
			{	(g) Diphtheritic.
			{	(h) Gangrenous.
	{	(B.) Stomatitis occurring as a complication,	{	(a) Varicellous.
			{	(b) Varioloid.
			{	(c) Rubeolic.
			{	(d) Scarlatinous.
			{	(e) "Ourlienne."
			{	(f) Occurring in typhoid fever and pneumonia.
			{	(g) Uræmic.

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|-----------------------------------|---|--|
| II. BUCCAL ULCERATIONS, | { | (a) Syphilitic ulcerations.
(b) Pertussis.
(c) Tuberculous.
(d) Desquamative epithelial ul-
cerations of the tongue.
(e) Ulcerations occurring in
Arthrepsy. |
|-----------------------------------|---|--|

The question of diagnosis is a comparatively important one from a scientific point of view. There is some doubt whether aphthous and herpetic stomatitis are not one and the same thing. The matter assumes a certain importance when we consider the relationship between the microbes of the mouth and those of the system generally.

According to Lebon herpetic stomatitis is distinguished from other buccal affections by its mode of eruption and its evolution. From aphthous stomatitis in particular, which it most nearly resembles, it is distinguished by occurring in groups, and, unlike the aphthous affection, is not confined to the inner side of the lips and to the frenum of the tongue, gums, and cheeks, but may occur in any part of the mouth and about the palatine arch. In addition, herpes of the lips is also present in many cases. (For further details as regards the diagnosis of the various varieties of stomatitis see Lebon (*l. c.*).

The prognosis of herpetic stomatitis is favorable, only the lesions form a favorable nidus for the development of other disease germs. Lebon cites a case where a fatal diphtheritis was thus inoculated.

The treatment of herpetic dermatitis consists in occasional applications of solutions of nitrate of silver up to ten per cent., or of dilute peroxyd of hydrogen. Together with these, frequent cleansing of the mouth with chlorate of potassium, borax, or boric acid is desirable.

Stramonium, Eruptions from.—(See *Dermatitis medicamentosum*.)

Striæ Atrophicæ.—(See *Atrophy of the Skin*.)

Strophulus.—(See *Miliaria*.)

Strychnia, Eruptions from.—(See *Dermatitis medicamentosum*.)

Stye.—(See *Hordeolum*.)

Sudamen.—(See *Miliaria*.)

Sweat, Bloody.—(See *Hæmatidrosis*.)

Sweat, Colored.—(See *Chromidrosis*.)

Sweat, Phosphorescent.—(See *Phosphorescent Sweat*.)

Sweating, Excessive.—(See *Hyperidrosis*.)

Sycosis Coccogenica.—Sycosis is an acute or chronic, inflammatory, parasitic affection, involving the hair follicles, and often the perifollicular structures, characterized by pustules, papules, and tubercles, perforated by hairs, accompanied by burning and itching. The disease is confined to the beard and hairy parts of the face. Papules and then pustules form, each one having a hair as its centre, and showing little inclination to rupture. The pustules are generally discrete, but are sometimes so numerous as to be crowded together. They are accompanied by marked redness of the surrounding skin, sometimes by swelling, burning, and pain. Unless the suppuration is profuse, the hairs cannot be extracted without giving much pain. It sometimes occurs on the upper lip, following catarrh of the nose. It occurs equally in those who shave and those who do not.

The disease is essentially an inflammation of the hair follicles. In the early stages the hairs are firm in their follicles, but when there has been a good deal of suppuration they become loose, and may be pulled out. A cicatrix, with baldness, then results.

Sycosis is apt to be mistaken for eczema of the beard, and more especially for sycosis hypogenica, or true barber's itch. From the latter it is, however, distinguished by several marked features. In both affections

the hair follicles are attacked, but in the parasitic disease the lesions are simply large, rounded, red lumps, or variously-sized nodules, with few or no pustules. The hairs, however, in spite of the fact that there is no suppuration about their roots, come away easily, and sometimes drop out spontaneously. The presence of the spores of the vegetable parasite, when looked for in the roots of the diseased hairs under the microscope, will greatly aid in the diagnosis. (See *Tinea sycosis*.) From eczema of the beard sycosis is distinguished by the absence of oozing or weeping, and also by the fact that eczema rarely attacks the beard without showing itself elsewhere. It spreads about in pustules and crusts in the neighborhood, while sycosis is strictly marked by discrete pustules, each with its hair running through the centre.

External treatment is that most generally useful in sycosis. Exposure to irritating influences is to be avoided. The hair should be kept clipped close or shaved. The latter is to be preferred. Although painful at first, I regard it as the *sine qua non* of successful treatment, and usually insist upon it. In this, as in some other matters, it is only the first step which costs; after shaving a few times, the patient is brought to see the reasonableness of the procedure by the comfort which it brings. Shaving should be practiced every second or third day, according to the rapidity with which the beard grows. When shaving is to be performed for the first time, the hairs should first be clipped close, and then a poultice should be applied, to soften the crusts. When there is much inflammation, this poultice may be made of bread-crumbs and dilute lead water, and applied cold. This is very soothing. After such careful preparation, shaving is a much less painful operation than it would otherwise have been. Shaving having been established as a habit, the local medical treatment may be put into employment. When the disease is acute and there

is a good deal of pain and swelling, black wash may be thoroughly applied every two or three hours, followed each time, as soon as it is dry, by oxide of zinc ointment, gently applied by means of the finger, or spread upon pieces of soft linen and bound upon the parts.

The following wash, not to be followed by ointment, is likewise of service in acute syccosis coccogenica :—

R.	Pulv. zinci carb. præcip ,		
	Pulv. zinci oxidi, aa	℥ ij	
	Glycerinæ,	f ℥ ij	
	Liq. plumbi subacetat. dil.,	f ℥ ij	
	Aquæ rosæ,	f ℥ viiiss.	M.

In subacute cases the following wash is very good :—

R.	Sulphur. præcipitat ,	℥ ij	
	Pulv. camphoræ,	gr. x	
	Pulv. tragacanth,	℥ j	
	Aquæ calcis,	f ℥ iv.	M.

SIG.—Shake well, and apply two to four times daily.

This sometimes succeeds when all else fails.

If ointments are to be employed, the following will be found soothing, in the acute stage :—

R.	Pulv. zinci carb. præcipitat.,		
	Pulv. zinci oxidi, aa	℥ j	
	Ung. aquæ rosæ,	℥ j.	M.

To be applied immediately after shaving.

The following procedure, however, is more in accordance with modern ideas regarding the treatment of this affection.

Shaving is followed by Unna by the application of “Salve-muslins.”* In other cases epilation of pustules, washing with and the application of five per cent. alcoholic solution resorcin to each affected follicle is practiced. Unna also uses sulphur, resorcin, ichthyol, pyrogallol, and chrysarobin ointments, two to five per cent., or ichthyol in ten per cent. strength in water, as a fomentation. Mercurial ointment,

* Salve-muslins are peculiar preparations of ointments spread upon muslin by a patent process. They are expensive and difficult to get in most parts of this country, but may be substituted by impromptu applications.

with ten per cent. carbolic acid, and up to one per cent. corrosive sublimate, is also useful.

If the beard cannot be shaved, each affected hair must be extracted, the follicle washed out, and a zinc-sulphur or weak resorcin sublimate salve then applied.

Rhinitis, which is often present, should be treated by the nasal douche with a one per cent. solution of ichthyol in water.

For some time after the disease appears to be cured, the face should be shaved (using sublimate soap), and each inflamed follicle that may appear should be treated as above, and followed by one of the above ointments.

When the affection is of long standing, and when there is much infiltration, *sapo viridis* well rubbed in with a flannel rag and a little water, and after washing off followed by ung. diachylon, may be employed.

When the eruption exists only at one or two points, and is subacute or chronic, stronger stimulants may be used. Sulphur ointment, half a drachm to a drachm to the ounce, or one of the mercurial ointments, may be employed.

Depilation is only to be used when the roots of the hairs are loosened by suppuration.

The prognosis in *sycosis* should be guarded, for while some cases yield readily to treatment, others, particularly when the disease involves a considerable area of the face, last for months, and even years, in spite of the most assiduous attention. Relapses are not uncommon.

Sycosis hyphogenica, or *ringworm of the beard*, is confined to the hairy part of the face and neck, and is characterized by inflammation of the hair follicles, with the formation of dull-red, fleshy tubercles, with little or no suppuration. The disease usually begins with slight redness and scaliness, as *tinea circinata*, but in a few days the hairs begin to be affected; they become dry, brittle, and sometimes loose, the skin becomes nodular and

lumpy, with here and there, in some cases, points of pustulation about the hair follicles. The deeper tissues become involved later, and thick, raised masses of induration of a dusky, reddish or purplish color appear, giving rise to considerable disfigurement; the rapidity of development is sometimes remarkable. Though there is usually little or no suppuration, yet, now and then, suppuration with crusting may be profuse, so as to mask the essential features of the disease and make it look like pustular eczema. The symptoms vary much in different cases. Sometimes there is a good deal of burning and itching; at other times there is very little. The affection is never so troublesome as sycosis coccogenica. The cause of the disease lies in the presence of the ringworm fungus, and the structure of the parts alone causes it to differ from the other forms of ringworm in appearance.

The diagnosis of sycosis hyphogenica from sycosis coccogenica is sometimes difficult; but there are certain characteristic features which must be borne in mind. In sycosis hyphogenica there are hard, reddish lumps as large as a pea or a cherry, and evidently extending down into the skin, while in sycosis coccogenica the lesions are superficial pustules on a comparatively smooth, inflamed surface. The hairs in this form of sycosis are loose and easily pulled out, while in sycosis coccogenica the hairs are firm and the attempt to pull them out gives rise to much pain, unless there has been a good deal of suppuration about their roots. (See *Sycosis coccogenica*.) It must be remembered that sycosis hyphogenica is the true "barber's itch," and is often contracted in barber shops from the use of a razor or shaving brush impregnated with fungus from a case of the disease previously shaved.

The treatment of ringworm of the beard requires both epilation and the use of parasitocides. Any hairs which are loose should be pulled out, all crusts and scales removed,

and one of the remedies mentioned under *tinea tonsurans* immediately applied. In addition to these, lotions of sulphite of sodium or of sulphurous acid are often useful.

Sycosis, Non-parasitica.—(See *Sycosis coccogenica*.)

Sycosis, Parasitica.—(See *Sycosis hyphogenica*.)

Syphilis of the Skin.—The syphilitic eruptions of the skin are characterized by certain features in common. These are: 1. Polymorphism. 2. Peculiar color. 3. Rounded form. 4. Apyretic, indolent, non-itchy character. 5. Curability by mercury.

They will be conveniently considered under the following heads: I. Erythematous. II. Papular. III. Pustular. IV. Tubercular. V. Gummatous. VI. Bullous. (A vesicular and a pigmentary variety are described by authors, but they are extremely rare.)

The Erythematous syphiloderm is the earliest and one of the commonest manifestations of syphilis, but occurring, as it often does, upon the covered parts of the body, and giving rise to no subjective symptoms, it often passes unnoticed. It comes out from the sixth to the eighth week after the appearance of the chancre, but when mercury has been given from the first its advent may be very much delayed. It presents itself in the form of diffuse macules of various sizes, and of a pale rose, later a brownish or yellowish tint. It is usually seen on the sides of the body and on the abdomen, chest, and back, also on the flexor surfaces of the limbs, rarely upon the face and hands. The diagnosis of the erythematous syphiloderm is usually not difficult. It is commonly accompanied by some of the other symptoms of syphilitic infection, general malaise, nocturnal headache, wandering pains in the limbs, sore throat, etc.; while not infrequently traces of the chancre, and the engorgement of the inguinal, sub-occipital, and other glands, can be made out.

The erythematous syphiloderm runs a slow course, and

is often accompanied, toward the last, by papular and other lesions, showing the polymorphous nature of the disease.*

The Papular syphiloderm is characterized by the appearance of small, hard, solid elevations of various size, not containing fluid, and of a coppery or ham-red color, terminating in resolution. It assumes various forms, small and large, scaly, moist, and vegetating. The small papular syphiloderm consists of single and disseminate or grouped, pin-head to small pea-sized, hard, round, or pointed papules, at first bright red in color, but later of a dusky tint. It is a well-marked eruption, generally occupying a considerable area, and found commonly about the shoulders, arms, trunk, and thighs.

The small papular syphiloderm may occur, as one of the early manifestations, as early as the third or fourth month, or it may occur later, after other lesions have occurred. Relapses are not infrequent. Other lesions, as large papules, small pustules, and moist papules are apt to be present at the same time. It is most likely to be mistaken for eczema, especially when it itches slightly, as it does at times, on its first appearance. It may also be mistaken for psoriasis. A reference to the description of these affections and to the tables of differential diagnosis will show their distinguishing features.

The large papular syphiloderm is, in some respects, similar to the smaller variety, but is met with in other localities, and shows fewer as well as larger lesions. Its favorite seats are the forehead, just beyond the scalp (*corona veneris*), about the mouth, nape of the neck, back, flexor surface of the extremities, scrotum, labia, perineum, and margin of the anus. It is one of the commonest of all the syphilitic skin diseases. It may occur early or late, but is

* The loss of hair, which sometimes occurs at this stage, will be found described under *Alopecia syphilitica*.

very apt to follow closely on or accompany the erythematous syphiloderm. This variety is more amenable to treatment than the small papular, excepting where it takes on the annular or serpiginous form, when it may prove very stubborn and persistent.

The moist papule (sometimes called "mucous patch," though this term should be restricted to lesions occurring on mucous membranes) is the ordinary papule, with its horny epithelial surface macerated off, usually on account of the contact of two contiguous surfaces, as in the neighborhood of the anus and scrotum and about the mouth. The surface of these patches is dusky red, moist, and secreting. These lesions are the most dangerous, as to contagion, of all syphilitic lesions, and quite as many cases of chancre are derived from these moist papules and from true mucous patches of the inside of the mouth as from chancres. The favorite seats for moist papules are the glans penis and scrotum in the male, the external genitals in the female, the umbilicus in infants, and the edge of the mouth and the anus in all three. The diagnosis rarely presents any difficulty, because there are almost always concomitant lesions.

Occasionally the moist papule takes on a luxuriant papillary, warty growth, when the lesions are called vegetating papules. They resemble, but are on no account to be mistaken for, the non-syphilitic, "venereal," or acuminated wart. The secretion of the vegetating papule is highly contagious. It does not, however, produce another vegetating lesion on the person inoculated, but an ordinary chancre.

The papulo-squamous syphiloderm is a papular eruption where the scaly element is prominent. It is chiefly interesting because it is apt to be mistaken for psoriasis—a misfortune rendered much more likely to happen by the perversity of some writers who call this lesion "syphilitic

psoriasis," a misleading and confusing term, which should never be employed. The chief element of distinction lies in the fact that psoriasis is altogether a scaly disease, with but little infiltration, while the papulo-squamous syphiloderm shows comparatively few scales, with a hard, sometimes raised base.

The syphilitic disease is not uncommonly found on the palms and soles, while psoriasis is very rarely found in this locality. (See differential diagnosis of palmar lesions under *Psoriasis*.)

The pustular syphiloderm occurs in a variety of forms. The pustules vary greatly in size, but are all characterized by the rapidity with which they crust, a rapidity increasing with the size of the pustule. The small pointed pustular eruption is abundant and usually occurs with some other and characteristic lesions; it presents no peculiarities of interest except that, as it matures, the epidermis around the lesion raises and forms a ring or collarette which is very distinctive. The large pointed pustular syphiloderm is the eruption which used to be called "syphilitic acne" (another barbarous and confusing designation). The pustules resemble those of acne, and still more those of smallpox, and when they occur upon the face, accompanied with high fever, care must be exercised in examining all the concomitant symptoms, or a mistake in diagnosis may be made, and a syphilitic patient thrust into a smallpox hospital. The crusts which result from the drying up of the pustules rest upon little ulcers, and this gives an important diagnostic point. For if, upon lifting a crusted pustule, it displays a little well of pus beneath it, the lesion is syphilitic, while if only an excoriation is seen, the lesion is almost certainly not syphilitic. In addition to acne and smallpox this syphilitic eruption is apt to be confounded with the iodide of potassium eruptions. (See *Dermatitis medicamentosa*.)

The small, flat, pustular syphiloderm is made up of small, flat pustules aggregated in groups and rapidly crusting. It occurs chiefly about the nose, mouth, in the beard, on the scalp, and about the genitalia. On lifting the crusts a shallow or deep ulcer is found. It may be mistaken for impetigo or eczema, but ulcers are not found in those affections. It is one of the more benign syphilodermata.

The large, flat, pustular syphiloderm shows itself in finger-nail-sized, flat pustules on a deep red base. Sometimes the ulcer underneath is shallow, at other times deep, punched out, and secreting an abundance of pus, which may dry up in thick, oyster-shell-like crusts (*rupia*). The shallow ulcerated pustules of this variety are benign. The deeper ulcers generally occur in broken-down individuals, and are of more unfavorable significance. They can hardly be mistaken for any other disease. They occur in the ninth to the twelfth month of syphilis.

The Tubercular Syphiloderm.—The eruption here consists of one or more solid elevations of the skin, varying in size from a split pea to a hazelnut; smooth, glistening, rounded or somewhat pointed, hard and felt to be deeply seated. Their color varies from a brownish-ham color to a bright red or true copper color. Sometimes they have an intensely dusky red hue, a color not met with in any other disease of the skin.

The lesions may occur singly or grouped, sometimes in circles or crescents, occasionally melting together in indurated patches. Usually only a few lesions or a small patch occurs. This eruption is never diffused over a large area.

Sometimes the tubercular lesions are grouped in a serpiginous form, and occasionally they ulcerate and crust, but not to a marked degree. The eruption is indolent and occurs late in the history of the disease, rarely showing itself before the second year. Not infrequently its appear-

ance is delayed to five, ten, even twenty years after the initial lesion, and in women, where the initial lesion and early symptoms are often overlooked or ignored, no "history of syphilis" can be obtained. Now and then vegetations may spring up on the tubercular syphiloderm, forming wart-like and cauliflower excrescences, with a fetid secretion.

The tubercular syphiloderm is peculiarly liable to be mistaken for lupus vulgaris. The tubercles of syphilis, however, are firmer, more deeply seated, and have a history of more rapid development. Lupus, moreover, appears usually first in childhood, while the tubercular syphiloderm is rarely seen before adult or middle age. Occurring on the face and especially in the region of the cheeks and canthus of the eyelids, the ulcerative tubercular syphiloderm may be mistaken for epithelioma, and this is the more easy because the syphilitic ulcer sometimes becomes converted into an epithelioma, of which I myself have seen two instances. The touchstone of treatment must be used here, and if the suspicious ulcer fails to yield to mercury and iodine it should be cauterized or excised.

The Gummatous Syphiloderm. Gummata are among the later lesions of syphilis. They are usually situated primarily in the connective tissue, and only subsequently make their appearance in the true skin, but occasionally the skin is first attacked and the gumma appears as a more or less circumscribed, slightly-raised, rounded or flat tumor, variable as to size and strongly tending to break down into an ulcer. The lesion resembles a blind boil abscess, with its dusky, purplish color and almost fluctuating sensation under the finger. Gummata are usually solitary. When ulceration takes place the cavity is deep, but fills up rapidly as a cure takes place. Gummata are apt to be mistaken for furuncle, abscess, enlarged lymphatic glands, carcinoma, and for fibrous and fatty growths. Gum-

mata are not unfrequently poulticed and then cut open by too zealous surgeons, with great resultant chagrin, when the firm, dry walls gape, where pus was expected to flow. They should never be lanced, as it is much easier to cause resolution by appropriate remedies than to cure the open sore which follows cutting.

The Bullous Syphiloderm is very rare. It is characterized by the appearance of blebs containing a clear, watery fluid, which soon tends to become cloudy and thick. Sometimes the lesion is more like a large pustule than a bleb. The lesions soon break or dry up with rupial crusts. When these are removed shallow ulcers are found. The bullous eruption is a late manifestation of syphilis, and is met with in the cachectic and broken down. It can only be mistaken for pemphigus or dermatitis herpetiformis, and in both of these affections the bullæ contain serum and not pus, and rupial crusts are absent.

The Pigmentary Syphiloderm has been carefully studied by Taylor, of New York (*N. Y. Med. Jour.*, Feb. 18, 1893). He says that the primordial pigmentary anomalies due to syphilis consists essentially in a super-pigmentation, which may, in whole or in part, be replaced by a corresponding loss of color or leucodermatous condition. This is the true pigmentary syphiloderm; all other discolorations are secondary processes.

The pigmentary syphiloderm is seen in the form of patches or spots of various size, as a diffuse pigmentation of greater or less intensity, which sooner or later becomes the seat of leucodermatous changes in the shape of small spots, which gradually increase in size. This is the retiform pigmentary syphiloderm—the *Syphilide pigmentaire à dentelles* of Fournier. Finally, the pigmentary syphiloderm is seen in the form of an abnormal distribution of the pigment of the skin, in which, owing to the fact of a crowding out of the pigment in places, these localities be-

come whiter, while the parts involved in the abnormal distribution become darker; in this way a dappled appearance is presented.

The treatment of the syphilitic affections of the skin should, in the early diffused eruptions, be internal only. When the lesions are comparatively few in number and of some size, especially when they are ulcerative, local applications may be used with benefit. Finally, in the late and indolent ulcerative, tubercular, or gummatous lesions, local treatment alone often suffices to heal the lesion, and since internal treatment, however good, will not insure against a relapse, it need not necessarily be used. Mercury is to be employed in the earlier and generalized lesions. The protiodide of mercury, in doses of one-fourth of a grain, in pill form, thrice daily, gradually increased until the disease yields or the gums are touched slightly, is the best average treatment. The biniodide of mercury is also very useful in doses of $\frac{1}{16}$ to $\frac{1}{8}$ grain, dissolved in water, with the aid of a little iodide of potassium, when for any reason it is preferred to give the mercury in a fluid form.* Iodide of potassium is to be reserved for the later lesions, or to mix with the mercurial in stubborn cases. A dose of five grains will be found large enough in the great majority of cases, but it must be pushed rapidly if the lesions do not yield.

Local treatment is required when the lesions are situated on the face and hands, and when it is desirable to hasten their disappearance by all means, or when ulcers,

* In those cases where the gums are unusually susceptible to the influence of mercury the following formula, suggested by Unna (*Monatscheft. f. Prakt. Dermatol.*, Bd. xvii, No. 9, p. 466), may be employed as a tooth powder:—

R.	Potassii chlorat.,	ʒiv	
	Pulv. cretæ,		
	Pulv. rhizoma iridis,		
	Pulv. saponis castiliensis,		
	Glycerinæ, aa	ʒj.	M.

with profuse and disagreeable discharge, are present in any part of the body. For dry lesions, the ammoniated mercury ointment, or a twenty or ten per cent. oleate of mercury, may be rubbed firmly into the skin, once or twice daily. For moist lesions, a solution or stick of nitrate of silver may be employed. In ulcers, bits of soft linen, cut a little smaller than the lesions and spread thickly with ung. hydrarg., full or half strength, may be applied. Syphilitic ulcers yield more readily to aristol than iodoform or any other local treatment.*

Skin Diseases in Hereditary Syphilis.—The syphilitic eruptions of infants are, in all respects, the same as those of adults, excepting in so far as their appearance is altered by the peculiarities of structure of the infantile integument.

The mortality of syphilitic children is very great, fully one-third failing to reach maturity. Abortion, resulting from the death of the fœtus, usually occurs about the sixth month. An aborted fœtus is usually in a macerated condition, the skin being easily detached, and the surface having a livid purple color. The integument either shows nothing characteristic, or large bullæ may be found on the palms and soles.

Syphilitic children generally present a healthy appearance at birth, and, for a week or two, all seems to go well. Then symptoms of debility and decreased vitality show themselves; the infant begins to emaciate and grows wizened and aged in appearance. Catarrh of the nasal passages—the “snuffles”—shows itself, interfering with respiration, and thus sometimes itself alone being the cause of death. The skin becomes yellow, loose, and wrinkled. It is drawn tight over the bones of the face, which become

* To supplement the necessarily brief account of the syphilitic skin diseases and their treatment here given, reference may be made to the text-books on syphilis. I have given my own views at some length, in an article on *Syphilis*, in the “International Encyclopedia of Surgery,” vol. ii.

sallow and earthy, with prominent eyes and a peculiar senile expression, the infant presenting the appearance of decrepit old age. Now and then, however, excessive emaciation is not observed, even when the syphilitic poison has affected the system to a marked degree.

The *erythematous* syphiloderm is that which is earliest and most frequently observed in infants. It generally makes its appearance about the third week of life, often accompanied by coryza, and showing itself first on the abdomen, in the form of minute, round or oval, pink macules. It spreads rapidly over the surface of the body and limbs, and the patches grow larger and darker, until they may be half an inch in diameter, slightly or not at all elevated above the surface, coppery-red in color, and no longer, as at first, disappearing under pressure. There is usually little or no scaliness, excepting slight desquamation, at times, upon the hands and feet.

This eruption is very liable to be confounded with the simple erythematous rashes of early infancy. The most important diagnostic points are the tendency to infiltration, and the formation of papules in places where the skin comes together in folds, as about the neck, and especially in the region of the genitalia and nates. In addition, the tendency to scaliness about the palms, soles, and occasionally the nates is more or less characteristic. Sometimes, however, it is impossible to distinguish between the syphilitic eruption and simple erythema about the nates, at first sight, and the case must be held under advisement for a certain time, local treatment only being employed, before a positive diagnosis can be given. The syphilitic eruption tends to get worse, shows moist and infiltrated patches, etc., while other symptoms show themselves elsewhere. The eczematous eruption will either improve under local treatment or tend to show weeping and itchy patches, and vesicles or pustules.

The *papular* syphiloderm in infants is usually met with in connection with the erythematous eruption, but sometimes it may occur first. The lesions are dull-red, small, flat papules, occasionally mingling to form a patch. When seated about the anus or genitalia, the lesions become changed into typical moist papules, and now and then vegetations or syphilitic condylomata grow out of these lesions. These are *highly contagious*, and must be carefully distinguished from the simple vegetations growing about these parts in children who are poorly cared for. The latter are apt to be smaller, more pointed, and dry, and occur almost invariably near some muco-cutaneous juncture. They spring directly from the skin, while the syphilitic vegetations grow from an indurated, often moist, base. The simple vegetations are not so apt to have a fetid odor, whereas the syphilitic condylomata secrete an excessively offensive sero-purulent liquid. Moist papules in the infant are apt to occur at the verge of the anus and the commissure of the lips. In the latter locality they lead to deep fissures, the scars of which form diagnostic marks of hereditary syphilis in later life.

The *pustular* syphiloderm in infants may occur before the eighth week in children profoundly affected with syphilis, but usually shows itself at a later period. The pustules may be large, numerous, and deep, or few and small, according to the severity or mildness of the disease. The thighs, buttocks, and face are usually attacked. On the face they may coalesce and form thick, green, crusted lesions, resembling those of impetigo or pustular eczema. The syphilitic crusts, however, are dark, thick, and greenish, while those of the other diseases are lighter. On removal of the crusts the syphilitic lesions are found ulcerated, while only a shallow erosion is found under the eczema and impetigo crust. Moreover, itching, which is very common in eczema, does not exist in the syphilitic lesion.

A *furunculoid* eruption is sometimes met with in hereditary syphilis. The lesions begin as small nodules in the corium, and gradually increase to the size of half a nutmeg; ulcers form on the summit; sloughs are thrown off, and irregular, unhealthy cavities, with scanty, offensive secretion, are left, the lesions subsequently running a chronic course. They often result in cicatrices.

Tubercular and *bullar* eruptions sometimes occur in hereditary-syphilitic children; the former show no marked difference from similar lesions found in the adult. The bullar syphiloderm, the "pemphigus syphiliticus" of older writers, is usually found on the palms and soles. The skin shows patches of a violet color; in a short time, small, confluent vesicles make their appearance on these spots, and then coalesce and grow larger, until the fully-formed bullæ show themselves, varying in size from that of a pea to a hen's egg, with a yellowish-green, opalescent color and purulent contents. The lesions may be brownish or hemorrhagic; they break in a day or two, and leave shallow ulcers. The bullar syphiloderm is a symptom of grave import. It is important to distinguish it from simple pemphigoid eruptions. This may be done by noting its earlier appearance (it is congenital, or appears very soon after birth), its usually more serious character, and the concomitant symptoms and history. It is rarely the only symptom. Sometimes impetigo contagiosa may be mistaken for the bullar syphiloderm, but its non-ulcerative character, place of election, trifling severity, etc., should prevent this mistake. (See *Impetigo contagiosa*.)

The treatment of hereditary, infantile syphilitic skin diseases is essentially that of the disease in general. Mercury may be administered by baths, inunctions, or internally. Warm, daily baths, each containing ten grains of the bichloride of mercury, are frequently highly beneficial.* A small flannel skirt, with the waist tied around the infant's

neck, and then spread over the edge of the tub, will permit it to splash, without danger of sending the fluid into its mouth. The dose is sufficient for any age, from one month to twenty. Inunctions of mercurial ointment, in full or in half strength, may be employed. The best procedure is to smear a piece of ointment, the size of a small walnut, thinly over a flannel band, and then pin it around the abdomen, not changing it, but applying fresh ointment daily, until the flannel becomes stiff. Gray powder is given internally by many physicians. I rarely use it. In the later furunculosis and pustular eruptions the iodide of potassium, in doses of half a grain to two grains, according to the age of the infant, may be given with advantage. Inunctions of cod-liver oil, or the same internally, may be given at times, and nourishing and appropriate diet is absolutely required.

Syphiloderma. (See *Syphilis of the Skin*.)

Syringo-myeletis. (See *Morvan's Disease*.)

Telangiectasis Verucosum. (See *Angiokeratoma*.)

Tetter. A popular name given to several diseases, but chiefly to eczema.

Thrush. (See *Aphthæ* and *Stomatitis Herpetic of Infants*.)

Tinea. The name given to the vegetable parasitic diseases of the skin. Of these we have *T. circinata*, or ringworm of the body, *T. tonsurans*, or ringworm of the head, *T. sycosis*, or ringworm of the beard, *T. favosa* or favus, and *T. versicolor*, each of which will be described as clinically separate affections. Those due to the trichophyton fungus are, however, now generally known as *Trychophytosis*.)

Tinea Decalvans.—A confusing term, indifferently applied to alopecia areata and to trichophytosis tonsurans; two widely different diseases in nature, appearance and treatment, as will be seen by referring to the account of them given under their respective titles.

Tinea Favosa, or favus, is a vegetable parasitic disease, the fungus, however, being of a different species from the

ringworm fungus. The affection first appears as a diffused or circumscribed superficial inflammation, with slight scaling, followed by the appearance of one or several pin-head-sized, pale yellow crusts seated about the hair follicles, which develop into the characteristic lesions of the disease, raised, sulphur-yellow cups, which can be detached from the skin underneath, having a moist, excoriated surface. The cups are friable and can be powdered between the fingers. They sometimes aggregate into masses. Usually each cup has a hair running through its centre. When the disease is extensive, ulceration may exist under the crusts. It is usually situated in the scalp, but the nails and skin generally may be attacked in rare cases. When the nails are attacked they become thickened, yellow, opaque, and brittle. Favus possesses a peculiar odor like musty straw, or like the smell of mice. The disease gives rise to some, but not to excessive, itching.

When favus has existed in the scalp to a severe degree and for a long time, a cicatricial condition with permanent baldness may ensue. Favus is a chronic disease. Situated in the scalp, it requires most energetic treatment to dislodge it, and is very prone to relapse. Some pessimistic English observers think it can never be totally eradicated, but as met with in this country it is curable. It is a rare disease.

The diagnosis of favus is usually easy; the peculiar yellow cups and the odor are commonly present, and even where the shape of the cups has been lost by suppuration or broken down by treatment, a patch of characteristic color can usually be seen here and there. The mousey odor is almost always perceptible, and most cases can be diagnosed by this alone.

In the treatment of favus of the scalp the hair is to be cut as short as possible, after which the crusts are to be removed with poultices, or applications of olive or almond oil, and soap and hot water, as in pustular eczema of the

scalp. After they have been removed, the scalp, in severe cases, will show pits and depressions, with atrophy, baldness, or areas of superficial ulceration, resembling the effects of syphilis. Depilation is then to be practiced by means of a pair of flat-bladed forceps, especially made for that purpose, or by other means. A small patch should be cleared each day. Immediately after depilation a parasiticide should be applied, and there is none better than a saturated solution of sulphurous acid. Sulphur ointment, alone or with tar, may also be employed. Yellow sulphate of mercury, half a drachm to the ounce, or chrysarobin ointment of the same strength, cautiously used, may also be used with benefit. The disease is, of course, contagious, and precautions must be taken against its transmission, particularly among children in families.

Tinea Sycosis.—(See *Sycosis hyphogenica*.)

Tinea Versicolor is a vegetable parasitic disease (due to the *microsporon furfur*), which begins by the formation of pin-head and split-pea-sized, yellowish spots, usually scattered here and there over the affected region. These grow gradually larger and coalesce, forming hand-sized and even extensive patches, with extremely irregular margins, sharply defined, against the sound skin. There may be only a few patches, or, on the other hand, the disease may be quite extensive. The patches are usually more or less scaly. The disease does not usually itch in cool weather, but when the patient grows warm and sweats, there is apt to be a good deal of itching. In some cases there is never any itching. The chest and back are the parts usually and chiefly affected, the disease also spreading down the flanks, and over the buttocks, abdomen, and groin. The disease rarely extends above the shirt-collar, below the elbows, or below mid thigh. Practically, it is an affection of the trunk, which often presents a mapped appearance, owing to the peculiar and irregular configuration of the lesions.

The disease usually spreads slowly, and without treatment may continue for an indefinite period. Relapses are not uncommon, even when the treatment has been most judicious.

The diagnosis of *tinea versicolor* is not usually difficult. The seat of the disease is usually upon the trunk alone, and, wherever else it occurs, it is always to be found there. Vitiligo, chloasma, and the macular syphiloderm are the diseases with which *T. versicolor* is most apt to be confounded. In vitiligo, however, the patches are rounded and white; it is the surrounding skin which is dark; in chloasma the face and forehead are the chief seats of the disease, and are rarely spared, while in *T. versicolor* the face is never attacked. The macular syphiloderm does not often occur in large patches and sheets, and it is not confined to the localities of *T. versicolor*; also, there are almost invariably concomitant symptoms of syphilis. From all these affections *T. versicolor* is distinguished by its proneness to itch. Finally, a microscopic examination of a few of the scales, to which a drop of liquor potassæ has been added, under a power of 350, will show the peculiar and characteristic fungus, which, it may be remarked, is different from both that of ringworm and that of favus.

The treatment of *tinea versicolor* is simple, and, if thoroughly carried out, quite efficacious. The best plan is to anoint the affected parts with *sapo viridis*, well rubbed in daily, for a week, avoiding the contact of water. After a pause of forty-eight hours a hot bath, with soap, is taken, and the disease, if mild and recent, will be found to have disappeared. If some remains, the same process may be repeated until a cure is effected. Another excellent application is sulphite of sodium, in the form of a lotion, one drachm to the ounce of water.

Whatever treatment is employed must be thoroughly applied. If a single patch is left untouched the whole dis-

ease may return. Two or three weeks usually suffice for a cure if the remedies have been well applied; but the patient should be inspected a little later, to see if the disease has begun to crop out again in some obscure point. *T. versicolor* is contagious. I have never been able, however, to demonstrate the fact of contagion in practice.

Tongue, Affections of.—Only such are here described as are commonly included in the domain of Dermatology. Following Brocq (*l. c.*) I shall give some account of the affections known as *scrotal tongue*, *glossy* or *smooth patches of the tongue*, *black tongue*, *wandering marginate desquamation*, *glossodynia*, and *glossitis* (certain forms).*

(1) *Scrotal tongue* is a peculiar congenital condition of this member which is not very rare, and which is characterized by a marked exaggeration of the natural furrows. These ramify over the surface so as to give it the appearance of the wrinkled skin of the scrotum. The papillæ are usually enlarged and bright red. Some anxiety is sometimes caused by this condition, but it is not pathological and has absolutely no significance so far as is known.

The condition known as *smooth* or *glossy tongue* has no significance in itself considered; it occurs in connection with various disorders. The lesions are extremely superficial and desquamative. The epithelium covering the filiform papillæ disappears, the tongue is smooth and of a rose-red color, and from the surface the fungiform papillæ, equally denuded of epithelium, show more distinctly than in the normal condition. Usually the condition occurs in roundish or ovalish patches, more rarely large areas of the surface of the tongue are involved. This condition is not necessarily connected with any disease of the tongue nor with any aberration of the general health. I have met with it scores of times in perfectly healthy persons who had not been

* For other diseases of the tongue, see *Leukoplakia buccalis*.

made aware by any subjective symptoms that anything abnormal was present.

On the other hand, precisely similar appearances are presented in typhoid and other eruptive fevers and especially in syphilis. Occasionally these patches are sensitive or painful. Here some disease condition, local or general, is usually present.

Sometimes the process goes on to a depapillation of the tongue. In some cases a decided inflammatory action has gone on. The affection usually occurs in patches and is a symptom of glossitis of one form or another. It is apt to run on to leukoplakia or some similar condition.

The treatment of the more marked condition demands attention to the condition of the general system, hygiene, proper diet and regimen, and tonics are called for. Locally the greatest cleanliness about the mouth is to be enjoined. Alkaline washes are to be employed and occasionally penciling with dilute solution of chromic acid may be required.

Black Tongue is the name given to a peculiar papillary hypertrophy of this organ which assumes a dark color. The affection begins without the patient's knowledge and is usually discovered only by accident. It begins at the middle line just anterior to the lingual V, and extends from that point with greater or less rapidity, but usually little by little until at the end of seven weeks it may invade the entire dorsal surface.

The color may at first be yellowish or brownish, but gradually it grows black, especially toward the centre. At the same time the epithelium of the papillæ becomes hypertrophied until the tongue looks as if covered with short black hair, and such cases are frequently called hairy growths of the tongue.

There is usually little or no sensation, but sometimes the feeling as of a foreign body becomes annoying. The dis-

ease runs a variable course from a few weeks to many years, coming in successive attacks of a few days or a few weeks' duration and then disappearing to return again after a longer or shorter interval.

The cause is not known, though it is either simply an epithelial hypertrophy, or the effect of some parasitic growth as yet unknown. The treatment should be general, and any local applications should be such as not calculated to give rise to irritation. Perhaps Brocq's suggestion that alkaline washes with occasional pencilling with solution of salicylic acid, 10 per cent. to 20 per cent. in alcohol every two or three days, is the best. The prognosis is favorable.

Wandering Marginate Desquamation of the tongue, known also as "Marginate Exfoliative Glossitis," and by many more names besides than its importance demands, is a curious ring-worm-like eruption very common among infants and young children, which usually disappears by the fifth or sixth year. Its cause is unknown and its importance minimal. However, if mental or physical annoyance is caused by the affection similar treatment to that given above, only of a milder character, may be employed.

In adults, in whom the affection occasionally occurs, the following treatment is suggested by Unna:—

R.	Aqua sulphuris,								
	Aq. menth pip,	. . . . .	aa	. . . . .	Oss				
	Flor. sulphuris,	. . . . .			3	iiij-iv			
	Syrupi simplicis,	. . . . .			3	iiij			
	Gum. tragacanth,	. . . . .			3	liiss.		M.	

Shake before using. Gargle several times a day, holding the solution in the mouth for some minutes. Then use the sediment in the glass as a dentifrice.

Glossalgia.—A peculiar, painful affection of the tongue, which is not a neuralgia in the ordinary sense of the word. It is characterized by the sudden onset of pain confined to a particular point, usually toward the edge of the tongue, anterior to the lingual. The attacks are intermittent, and

the affection may last for years. Much mental anguish, as well as physical, is at times experienced by patients, who are convinced that there is cancer present.

The treatment of glossalgia is far from satisfactory. Moral treatment is required to persuade the patient that there is no organic lesion and that the affection is not dangerous in any way. If the patient is of a rheumatic diathesis, the treatment appropriate to this should be used. Quinine and arsenic have also been employed with good effect. Fournier employs bromide of potassium up to two drachms daily. Iodine and mercury are harmful. Electricity has been employed without much avail. Section of the lingual nerve gives relief for some months. Other procedures are: the removal of carious teeth, and frequent use of emollient gargles, as linseed tea, etc., with the addition of five per cent. carbonate of sodium. Carbolic acid, menthol, or cocaine may be pencilled upon the painful point. Hypodermic injections of morphia are not advisable.

Glossitis.—Inflammations of the tongue are traumatic or non-traumatic. The former may be due to carious teeth or to some accident. The latter (not including those which occur in the course of fevers, etc.) is found in gouty, rheumatic, and neuropathic persons. The affection is characterized in its mildest form by diffuse redness of the tongue, prominence of the natural creases, and by slight tingling, pricking, burning sensations at times, and the impossibility of touching certain kinds of food.

A more marked form of glossitis is characterized by congestive attacks, during which the tongue is denuded, swollen, red, painful, and blistering, with erect papillæ of a brighter red color.

The most severe form of glossitis is characterized by deep fissures and by a brighter red color. The papillæ are prominent, or have disappeared. The filiform papillæ may

disappear, leaving the fungiform the more prominent; the tongue may become smooth and varnished; more or less defined superficial ulcers and erosions occur. The more desquamated portions of the tongue are thickly coated. This form is the *dyspeptic glossitis* of some authors.

The treatment of this form of glossitis is, first of all, general. The gout, rheumatism, neurotic tendency, etc., must be combated. The intestinal tract, however, must be most carefully looked after. The digestion should be made as perfect as possible, and constipation should never be allowed. A sojourn at some mineral springs is, I think, one of the best forms of treatment for this condition. Richfield, Saratoga, and the Virginia Springs, of this country; Strathpeffer, in Scotland; Vichy, in France; and Carlsbad or Hambourg, in Germany, are the localities most likely to be of use.

The Hunjadi, Offener Racozy, and Rubinat-Condal mineral waters may either be taken with advantage at home. I may here say that all these waters gain in efficacy if taken largely diluted, and especially if they can be taken warm.

Regimen is of the highest importance. The patient should abstain from all irritant or highly seasoned food, and especially from tobacco or alcohol in any form.

If there is ptyalism tincture of belladonna may be given with caution. If abnormal dryness exists a gelatin disc containing a minute quantity of pilocarpin may be used, but this is rather a risky proceeding. One to two milligrams (about $\frac{1}{60}$ grain) is the dose recommended by Brocq.

Locally emollient gargles are called for. Chlorate of potassium does little good and often irritates severely.

Tooth Rash.—(See *Eczema in Children*.)

Trichophytosis Circinata, or ringworm of the body, is a contagious, vegetable parasitic disease, due to the presence of minute spores and mycelia or threads growing in the

epidermis and giving rise to one or more circumscribed, circular, variously-sized, inflammatory, squamous patches, occurring on the general surface of the body, accompanied by itching. The disease usually begins as a small, reddish, scaly, rounded or irregular-shaped spot, which in a few days assumes a circular form, healing in the centre as it spreads on the periphery, which is usually papular, but may occasionally be made up of small vesicles. Sometimes the rings coalesce and form gyrate figures. The disease may attack any part of the body, and is transmitted by contagion from one part to another. In children who have ringworm of the scalp more or less ringworm of the body is almost sure to be found at one time or another.

Ringworm is eminently contagious, and is not only transmitted from one human being to another, but also from domestic animals, chiefly horses, dogs, and cats. Children are more susceptible to the disease, although adults also may contract it. The diagnosis of ringworm may usually be made from its very peculiar clinical features, and also from examination of the scales by means of the microscope. A few scales soaked in a drop of liquor potassæ and examined under a power of 350 diameters will show long threads running across the epidermic cells, which are quite characteristic. Their absence, however, is not conclusive against the diagnosis of ringworm, as they are sometimes scanty and difficult to find.

The treatment of trichophytosis circinata is simple. The lesions are to be cleansed with soap and hot water, and then an ointment of ammoniated mercury, 15 to 40 grains to the ounce, may be thoroughly rubbed in. The process to be repeated twice daily until a cure is effected. In more stubborn cases a lotion, or ointment, of one drachm of sulphite of sodium to the ounce, or pure, strong sulphurous acid sopped on, will usually suffice. In obstinate ringworm

of the thighs and groins the following ointment is efficient. This is for adults:—

R.	Creasoti,	m _{xx}	
	Olei cadini,	f ₃ iij	
	Sulphuris,	5 iij	
	Potassii bicarbonatis,	5 j	
	Adipis,	5 j.	M.

There are other remedies innumerable, but those mentioned will, one or another, generally suffice.

Trichophytosis Kerion is an inflammatory and suppurative form of trichophytosis tonsurans. It shows smooth, yellowish, reddish, or purplish patches, more or less raised, edematous, and boggy. They are honeycombed and studded with yellowish, suppurative pits, the openings of the distended hair follicles deprived of their hairs, which discharge a mucoid, gummy, honey-like fluid. They sometimes itch, burn, and pain. In severe cases baldness results. The condition sometimes supervenes in a mild degree during the treatment of trichophytosis tonsurans. The treatment is the same as for the latter, excepting that lotions of sulphurous acid may be added to the parasitides above mentioned. Alder Smith has suggested the artificial production of T. kerion by penetrating the hair follicles by a needle moistened with croton oil. This must be practiced with caution, and only over a small area, say a quarter of an inch square, at any one time, for fear of exciting too great inflammatory action.

Trichophytosis Tonsurans (formerly called *Tinea Tonsurans*), or ringworm of the scalp, is precisely the same disease as trichophytosis circinata, above described, only occurring in the scalp, especially in the hair follicles. It is characterized by one or more, usually circular, variously-sized, more or less bald, patches, covered with ashen-gray scales, with a "goose-flesh" appearance, and numerous small, broken-off stumps of hair. Sometimes the disease is disseminated, when a search through the scalp will show black

points scattered here and there, which are the stumps of diseased hairs broken off level with the scalp. Ringworm of the scalp is a disease of childhood, and is not met with in the adult. It is highly contagious among children. Microscopic examination shows the hairs filled with roe-like spores, infiltrating their tissue and rendering them highly brittle.

The diagnosis of ringworm of the scalp is usually easy. The only disease with which it is liable to be confounded is alopecia areata, but here the hairs fall out entire, leaving a smooth, ivory-like surface. Now and then squamous eczema of the scalp looks like ringworm, but there are no broken-off hairs.

The treatment of the ringworm of the scalp is tedious and difficult, because it is hard to get the remedies down to the roots of the hair, where the fungus greatly flourishes. Of the great number of remedies constantly turning up almost all would be good if they could be gotten into contact with the fungus, but the best will fail if it cannot be made to reach the last and remotest spore in the deepest hair follicle.*

As a preliminary to treatment the hair should be cut short, scales should be cleansed from the scalp, and the diseased hairs should be pulled out by means of convenient forceps, immediately after which the parasiticide should be applied. In boys, when the eruption is extensive, the scalp may be shaved from time to time. Daily epilation of dis-

* Bésnier (*Acad. Méd.*, Paris, 1884) says: "In the present state of science we do not possess a medicinal agent capable of modifying the living cells or living organic fluids in such a way as to render them unfit for the germination of the microphyte, or microbe, without altering these cells and these liquids in their vitality to such a point as to compromise life locally or generally. The applications commonly employed have no other effect than that of producing in the parts affected an eliminatory irritation. This irritation must be set up at the proper place to the degree that is required in each case.

eased hairs is an exceedingly troublesome, but very necessary procedure.*

Among local remedies carbolic glycerine is one of the best. It may be applied to the diseased patches in strength varying from 1 in 8 to 1 in 3, according to the age of the patient, while a weaker lotion of the same should be smeared over the scalp generally to prevent drying of the scales and spread of the contagion.

Laillier, as the result of an enormous experience at the St. Louis Hospital, in Paris, recommends solutions of corrosive sublimate, 1 to 300 to 1 to 1000.

Of course, a certain amount of caution should be observed in the application of this remedy.

Thin employs sulphur ointment, one drachm to the ounce.

Iodized collodion, 1 to 30, has sometimes been employed with success.

An ointment highly recommended by Alder Smith is the following :—

R.	Acid. carbolic. cryst.,	
	Ung. hydrarg. nitrat.,	
	Ung. sulphuris, āā	3 ss. M.

The ingredients are to be mixed without heat. This ointment may be used in children over eleven years of age. Under this age it is advisable to use a double proportion, or even more, of the sulphur ointment. This may be used once a day over the entire scalp, the patches themselves being rubbed twice a day. As made in this country, it is apt to be very soft, which is an inconvenience. In disseminated ringworm of the scalp, oleate of mercury (a five per cent. solution in children under eight years of age, and a ten per cent. solution in older children) may be used. The oil is to be rubbed in nightly with a sponge mop, care

* As the hair invariably breaks off, the epilation is incomplete. But by this means we remove a mass of the fungus and allow of the penetration of the remedy more deeply than otherwise.

being taken not to allow it to run over the face; a cap should be worn at night. When the scalp is very irritable and the application of any of these remedies causes inflammation and superficial crusting, the following ointment may be used with advantage:—

R.	Ol. cadini,	ʒ iss	
	Sulphuris,	ʒ iss	
	Tinct. iodini,	ʒ iss	
	Acid. carbolic.,	℥ _{xx} -xl	
	Adipis benzoat.,	ʒ iv.	M.

In weakly children cod-liver oil, arsenic, and iron are often required, and should always be prescribed if the case seems to demand them, or if the eruption spreads from one place to another while under treatment.

The prognosis of trichophytosis tonsurans should be guarded as to the time required to effect a cure. In cases of average severity, if there are several corn-sized patches of disease, and if the hairs are at all markedly involved, four months, at least, of careful treatment will usually be required to effect a cure. When the disease is disseminated a much longer time will be required. A cure should not be promised, unless all directions as to shaving, epilation, etc., are faithfully carried out. In cases where kerion forms, as the result of treatment, or in the course of the disease, a more rapid cure may be expected. (See *Trichophytosis kerion*.)

Tubercle, Dissection.—(See *Dissection Wound*.)

Tuberculosis of the Skin.—Under this head I shall include those facts which in previous editions were included under the term *Scrofuloderma*. Properly speaking the various forms of lupus would come under the head of tuberculosis of the skin, but as these diseases have so long been known by their present name, I shall treat them under the head of Lupus. The various forms of tuberculosis of the skin may be treated under the head of *Accidental Inoculated Tuberculosis*; *Tuberculous Ulcerations of the Skin*; *Scrofu-*

lous Tuberculosis; Gummata and Secondary Infections. Under the head of Accidental Inoculated Tuberculosis are included the various forms of anatomical, or dissection tubercle, or wart.* The anatomical tubercle is usually inoculated in dissections or in operations on tuberculosis patients. The hand is the common seat of such inoculation and particularly the thumb and forefinger, a circumstance which is explained by the frequent contact with various objects which may bear the contagion. Du Castel (*Tuberculoses Cutanées*, Paris, 1879) says that he has observed cases in which tuberculosis of this variety has been inoculated upon the forearm by contact with a tuberculous patient. Other cases where the face or other parts have been wounded by utensils belonging to tuberculosis patients have been reported.

Anatomical tubercle usually shows itself first by the appearance of a small red papule, in the centre of which is seen a white point which softens and ulcerates, exuding a thin sero-pus. It then becomes covered with a yellow crust; not infrequently a series of similar papules form around the original one, ordinarily coalescing with it to constitute a larger lesion.

Occasionally a lesion is accompanied on its appearance by a more intense inflammatory action resembling an abscess or felon, and results in an ulcer covered with a grayish crust.

When completely developed the anatomical tubercle is made up of a warty infiltration of the skin of a livid red color, the surface of which is covered with hard, horny masses divided in numerous segments; the shape of the lesion is irregular, the development extremely slow, and the lesions may grow to the size of a quarter of a dollar by coalescence of similar elements.

When fully developed the anatomical tubercle seems to

* See also *Dissection Tubercle*.

remain for some time in *statu quo*; occasionally, however, new lesions appear in the neighborhood. Microscopic examination shows very much the same appearance as that presented in some forms of lupus.

Under the name of Lupus Sclerosum Vedow describes a form of tuberculosis of the skin appearing in red patches which develop and become prominent in the form of hard tuberculous elevations of a bright red color or occasionally violet; these patches gradually extend, the skin becomes considerably hyperporosis with a mammillated surface, rough, irregular, and showing at certain points warty or papillomatous excrescences; the lesion is deeply fissured, and these fissures may even become ulcerated, giving rise to a secretion of sero-pus; on pressing the lesion between the fingers the secretion exudes from the deeper parts. After a certain length of time the points originally attacked become spontaneously cured and cicatrized, the cicatrization beginning in the centre of the lesion and gradually extending toward the periphery, so that the fully developed lesion sometimes resembles a horseshoe in character. This is a form of tuberculosis like most of the others, extremely slow in its development.

Under the name of Tuberculosis verrucosum, Riehl and Paltauf, *Vierteljahresschrift für Dermatologie und Syphilis*, 1886, page 19, describe the form of Tuberculosis putus, which is practically the same as the anatomical tubercle or the lupus verrucosum of Vedow. According to these authors, however, this form of tuberculosis does not necessarily occur in connection with inoculation from without. It is first observed in persons who are already suffering with the symptoms of general tuberculosis. It is much more active in its nature, tending to spread more rapidly, and is often accompanied by secondary infection, as shown by lymphangitis and adenitis, and subsequently visceral tuberculosis. The diagnosis of these forms of tuberculosis of the skin is

sometimes difficult, but the peripheral hyperæmic border, the miliary ulceration around the lesion or at the bottom of the fissure, and tendency of cicatrization in the centre in older cases are quite characteristic. The diseases with which tuberculosis verrucosum is most likely to be confounded are the wart, the simple papilloma, benign vegetation, papillary epithelioma, lichen planus, Corné, papillomatous nævus, some forms of agminated folliculitis, and some forms of syphiloderma.

The ordinary wart is usually limited and sharply circumscribed, and does not attain to such a considerable size as the tuberculous lesion. It rises directly from the skin without any red border. Its surface is not covered with a thick crust concealing the papillary excrescences; on the contrary, it is itself covered by papillary outgrowths like the bristles of a brush. The simple wart never suppurates and never contains those suppurating fissures which are so characteristic of the anatomical tubercle.

Simple papilloma is often found upon the fingers and upon the feet, and it is not infrequently thought to be tuberculous in character, but the same points which distinguish the ordinary wart from the anatomical tubercle usually will suffice to distinguish the simple papilloma. Occasionally, however, the lesion must be examined microscopically if a correct diagnosis is to be arrived at.

When the secondary form, known as lupus sclerosum, develops in the neighborhood of the original tuberculous lesion as an anal fistula, it may be mistaken with those simple vegetations so apt to appear on moist surfaces bathed by irritant secretions in the neighborhood of the natural orifices, as the vulva or anus. The crusted irregular surface, the dryness of the lesion, the less sharply defined limits, the congestive limiting ring, the postulettes, and the miliary ulcerations corresponding to minute tuber-

cles, all point to the decided difference between tuberculosis and the simple papilloma.

Occasionally warty lesions developing in the skin of elderly persons may be mistaken for lupus sclerosum. The ordinary localities affected by the senile wart, namely, the face and shoulders, are not the same as those which are invaded by the warty tuberculous lesions. In addition to this there is no congestive ring around the senile wart. The crust, such as it is, and which is largely sebaceous in character, can easily be detached, and leaves slight ulcerations, irregular granular surfaces, easily bleeding, with everted edges, and tending to spread rather than to cicatrize.

The horny or hyperkeratotic form of lichen planus almost always occupies the front of the leg; its surface is not fissured; it presents no suppurating points and has not the red areola of lupus verrucosum. In addition it is accompanied by extreme itching.

Nævus papillomatosus has no congestive areola and shows no suppuration or ulceration; it appears in the earliest years of life, is often seated manifestly along the lines of nervous distribution, and is not infrequently accompanied by a growth of hair.

The miliary abscesses which lead to the ulceration of lupus sclerosum are often so distinct from one another and so well marked as to resemble the discoid suppurative perifolliculitis, which has been studied by Quinquaud and others. These latter, however, are usually made up of patches, rising perhaps an eighth of an inch above the normal skin like a macaroon, occupying the back of the hand or the forearm, sharply circumscribed, with rounded and not serpiginous outline. (See illustration under *Folliculitis*.) The skin surrounding is not involved; the surface of the lesion is mammillated, unequal, irregular, covered with small pin-head-sized orifices, and with yellowish sebaceous masses between these orifices corresponding to the dilated

folliculo-sebaceous glands; on pressure vermiform plugs escape from the orifices and the lesion resembles the rose of a watering-pot. The surface may be covered with a crust or with pus. These perifolliculites begin by a punctiform lesion which extends peripherally. This form of disease is probably due to the staphylococcus pyogenes albus.*

The general evolution of perifolliculitis is more rapid than that of tuberculosis verrucosum. Leloir says that it often attains its maximum of extension in ten or twelve days, and runs its entire course in six weeks; sometimes the papillomatous forms of the disease, however, may be much more slow in development. The lesion is much more suppurating than a tuberculous one, and may occasionally be covered by a crust, but it is not the horny character of the tuberculous lesion. I am inclined to think that occasionally the tuberculous character may be engrafted on that of the simple agminated folliculitis.

The papular syphilodermata which are sometimes covered with a thick epidermic coating have rather a thinner crust; the color is yellowish, brownish, or dark gray; the surface of the syphilitic lesion is not fissured; the eruption is dry and without the purulent secretion of lupus sclerosus. When the crust is detached a non-excoriated papule without any tendency to papillomatous appearance is observed. Besides this the tendency to a circinate arrangement of the syphilitic eruption is almost always observable in any cases likely to be confounded with tuberculosis of the skin. The erythematous areola and the pustula areola which we occasionally find in tuberculosis of the skin is not met with in syphilitic eruptions.

Within the last year I have met with a very extraordinary initial lesion of syphilis resembling very closely ana-

* See discoid suppurative perifolliculitis under *Folliculitis*.

tomical tubercle. This lesion occurred on the tip of the index finger of the right hand. I was at first convinced that it was an ordinary wart and treated it as such. Somewhat later I came to the conclusion that it was an anatomical tubercle, but was extremely surprised when my patient appeared with enlargement of the axillary glands and generalized erythematous eruption unquestionably syphilitic in character. Perhaps the diagnostic mark in this case should have been the locality, as tubercle is much more apt to occur on the back of the finger around the nail.

Most of the writers on the subject of tuberculosis of the skin fail to include these lesions among those which are liable to be mistaken for anatomical tubercle. The exact resemblance between these warty initial lesions of syphilis and various cases of anatomical tubercle which I have had occasion to see, would make the diagnosis in many cases rather difficult. The points, however, to which Du Castel refers, *i. e.*, that is to say, the peculiar dusky red areola, and the tendency to fissuring with slight exudation, will serve to decide the diagnosis.

Of course, when the question is one of diagnosis between tuberculosis of the skin and a papular syphiloderm the presence of other lesions in different parts of the skin which are quite distinctive may aid greatly the diagnosis.

Tuberculous Ulcers of the Skin.—These ulcers were first observed on the tongue, but of late years, since the development of the study of tuberculosis of the skin they have been found in other parts of the body. They vary considerably in their thickness and appearance. Vallas* gives the following statistics of their frequency:—

Anal region,	13
Lips,	11
Upper limbs,	5
Face,	2
Vulva,	2
Penis,	1
Lower limbs,	1

* Thèse de Lyon, 1887.

Thibierge thinks that the tuberculous ulcer of the penis has not received the attention which it should have, because the question of contagion is most likely involved in their production, just as it is in the case of ulcers of the lips.

The tuberculous ulcer is generally single; occasionally, however, several ulcers have been in the same neighborhood or separated in various regions of the body, particularly at the muco-cutaneous junctures. The size of the tuberculous ulcer rarely exceeds that of a ten-cent piece to a quarter of a dollar, although occasionally they have been found considerably larger. The common form is circular or oval, and occasionally polycyclic. The border of the ulcer itself has a peculiar aspect, resembling in a certain degree that of herpes. The edges are sharply defined, sometimes slightly undermined, and looking as if punched out. The bottom of the ulcer secretes a small quantity of sero-purulent liquid, and is rarely covered by a crust; it is granular, mammillated, and covered with small, reddish points, intermingled with yellowish gray projections which are the tubercular granulations undergoing caseous degeneration. These granulations rarely exceed the size of a small pinhead, and are much more numerous toward the edge of the ulcer. The general appearance of the ulcer is grayish, and is not likely, under ordinary circumstances, to be mistaken for any other form of ulceration, excepting herpes and occasionally syphilis. The tuberculous ulcer is not commonly painful. When occurring in the perianal region, sensations of burning or pain may be occasioned by efforts of defecation or passage of fæces over the surface.

Scrofulo-Tuberculous Gummata.*—Under the name of tuberculous gummata of the skin are described certain

* See for a very complete description Bésnier, *Dictionnaire encyclopedique, des sciences médicales*, IV Series, Tome IX.

nodosities having an inflammatory character, owing to production in substance of the skin or of the hypoderm of a tissue of feeble vitality with tendency to break down and give rise to suppuration. These lesions are the same as those which used to be called cold abscesses and the scrofulo-dermata *par excellence*.

The scrofulo-tuberculous gummata show themselves at first in the form of small infiltrations or nodosities, corresponding to a livid-red spot upon the skin covering them. More or less rapidly, in weeks or in months, they become elevated above the skin, spread in various directions, sometimes following a narrow line, pushing from below upward toward the surface, and breaking down at one or numerous points, at once or successively, then perforating the surface at the centre of regression to constitute a sort of subcutaneous cavern, with a minute orifice opening to the air and branching out beneath the surface into fistulous passages and *cul-de-sac* in all directions. The cover to these vaults and caverns is constituted by their violaceous integument, almost completely infiltrated by disease.

The discharge issuing from these broken-down lesions consists in blood, a yellowish, stringy serum, sero-pus, or purulent products. The process continues to advance slowly in various directions, new foci of retrogressive material being formed, breaking down and escaping by new orifices, until sometimes considerable areas of skin are invaded.

At this period the appearance is quite characteristic, forming the "scrofula" of popular language. Large patches of violaceous or livid-red skin, perforated here and there with orifices from which the fluids mentioned above are escaping, fluctuating swellings on the verge of breaking open, enlarged glands, and long, knotty scars, with enlarged lymphatic glands—make a characteristic picture hardly to be mistaken for any other lesion.

Treatment of Tuberculosis of the Skin.—The important point in the treatment of tuberculosis of the skin is to destroy entirely the centre of the disease, which may, if left alone, infect the entire system. Where the lesions are superficial, easily gotten at, and in a position where caustics or other destructive agents can be used, the suppression of the lesion is not difficult, but occasionally the superficial skin lesions are accompanied by internal foci of disease which cannot be reached by any caustic or other local measures. The internal treatment of tuberculosis of the skin is sometimes neglected. I think that we cannot go wrong in administering cod-liver oil in considerable doses, either pure or made up as the pharmacists supply this remedy in the present day. The French writers suggest six to eight tablespoonfuls in 24 hours. This is a much larger dose than most of our patients in this country are able to bear, but my impression is that the larger the quantity of the oil which can be taken and digested the more benefit may be expected. Where cod-liver oil is not easily digested I have sometimes found very good benefit from the aid of bread and butter. It should be urged upon patients as a medical prescription. When taken in very large quantities the system is supplied with very digestible, fatty matter, and I have sometimes observed most excellent effects from this remedy. After all, it is only a question of some easily digestible fat to be introduced into the economy. In addition to cod-liver oil the syrup of the iodide of iron in very considerable doses is often found useful. I, myself, have observed some cases of tuberculosis of the skin in the form of lupus improve very much under iodide of potassium. Hardy, of Paris, recommends chloride of sodium in the dose of five to fifteen grains three times a day. Morelle-Lavallée has obtained excellent results in severe cases of the lupus form of tuberculosis of the skin by hypodermic injection of iodoformed vaseline in the dose of about two

centigrams a day. Lupus patients, although suffering with any form of tuberculosis of the skin, improve very much by a short sojourn at the seashore. The sulphur springs, particularly those at Litchfield, and the Virginia Sulphur Springs, often have a very happy effect in improving the patient's general condition, thus enabling the system to fight against the progress of the disease.

Locally, tincture of iodide may be employed in the earlier stages of scrofulo-tuberculous gummata or a plaster mull containing creasote may be applied. Where pus has formed the abscesses should be opened with antiseptic precautions, scraping or cauterization should be resorted to, and the wound dressed with aristol, iodoform, euophen, or similar antiseptics.

Lactic acid, 80 per cent. solution in water, has recently been employed as a specific caustic in these affections. It acts very favorably in many cases.

Tuberculous ulcerations of the skin are usually best dressed with iodoform, salol, aristol, etc., with occasional cauterization with lactic acid. The warty form of tuberculosis of the skin requires an active treatment, destruction by the aid of thermo cautery, electric cautery, or scraping, followed by the application of caustics, as lactic acid.

Kleotzoff has used blue pyoktanin in a 1 to 500 watery solution successfully.

Among other forms of internal treatment especially available in scrofulo-tuberculous gummata may be mentioned the use of arsenic, creasote, iodoform, carbolic acid, chaulmoogra oil, internally and externally (Crocker), chlorate of potassium, etc.

Tumors, Erectile.—(See *Angioma*.)

Ulcer.—Ulcers may proceed from various diseases, leading to necrosis of the skin, or from the effects of traumatism, or pressure, or varicose veins. Ulcers proceeding from various diseases of the skin have been

touched upon under the heads of *epithelioma*, *lupus*, *syphilis*, etc. Varicose and similar ulcers require no special description in the present work.

Ulcer, Rodent.—(See *Epithelioma*.)

Uridrosis is the name given to an excretion from the sweat glands containing the elements of the urine, especially urea. It appears as a colorless or whitish, saline, crystalline deposit, or coating, looking as if flour had been sprinkled upon the surface. The deposit can be scraped off with a knife, and is seen, under the microscope, to present minute crystalline spicula. The disease is very rare. In most of the cases reported, partial or complete suppression of the renal function with disease of the kidneys and uræmic poisoning were present.*

Urticaria is an inflammatory disease of the skin, characterized by the development of wheals of a whitish or reddish color, accompanied by sticking, pricking, tingling sensations. The lesions are apt to come out suddenly and disappear again in a very short time, so that a patient seeking advice is often unable to show a sign of the disease, excepting scratch marks, even at repeated visits to the physician, when he may have been tortured and disfigured by it between times. The wheals are of various sizes, sometimes as small as a split pea, sometimes as large as the palm of the hand. They average finger-nail size. While the smaller lesions are usually round, the larger ones may be very irregular, crescentic, or linear; often they assume a grotesque outline. They may be barely elevated above the skin, or may rise to an eighth of an inch in height. They may be soft or firm to the touch, and whitish or pinkish in color. On the face the urticaria rash may cause great temporary deformity. The lip, or half

* *Talamon Medicin Moderne*, February 22, 1893 (p. 470), gives a case where this affection appeared on the face in a case of uremia.

the lip, for instance, may within a few minutes swell out to a great size, and remain thus for an hour or more. The eruption burns, stings, and tingles, as if the skin had been stung by nettles, hence the popular English name of the disease, "nettle rash," while in this country it is popularly called "hives." Sometimes these sensations of burning and tingling are merely annoying; at other times they may prove distressing to the last degree. Rubbing and scratching commonly aggravate the disease, bringing out new wheals.

The lesions of urticaria frequently change their locality, the eruption appearing now in one part of the body, and again in another. It occurs at all ages and in both sexes. Its duration depends entirely upon the presence or removal of the exciting cause. There are several varieties of urticaria:—1. *Urticaria papulosa*, described above. One form occurs among children, in widely dispersed, pin-head to split-pea-sized, flat, or acuminate papules, which appear suddenly and last for hours or days. It is attended by severe itching. 2. *Urticaria hæmorrhagica*, which is, in fact, urticaria occurring in the seat of a purpuric eruption, and is sometimes called "purpura urticans." 3. *Urticaria bullosa*, where the wheals are transformed into blebs, which may assume some of the characteristics of pemphigus (see *Erythema multiforme*.) 4. *Urticaria tuberosa*, or "giant urticaria," occurring in the form of large walnut- or even egg-sized, firm, more or less persistent nodes or tumors, resembling somewhat exaggerated tumors of erythema nodosum.

Urticaria may be acute or chronic. The acute variety is usually, though not invariably, ushered in by slight febrile symptoms, languor, headache, depression, gastric disturbance, furred tongue, etc. The rash appears suddenly, and may involve the whole body, or a portion only, accompanied by intense, and almost intolerable, burning

and stinging sensations. In a variable time, from one hour to a day, the symptoms subside and the eruption disappears, without leaving a trace, except in the form of scratch marks. Chronic urticaria may continue for months and years, or, indeed, as long as the cause exists. The individual lesions, which are usually small, come and go as in the acute form; crop after crop may appear, the skin being hardly ever free from them. The patient's general health may appear fair.

The causes of urticaria are numerous and of a very diverse character. Certain external irritants and poisons to the skin, as the stinging-nettle, jelly-fish, caterpillars, fleas, bed-bugs, and mosquitoes, are not infrequent causes. Among internal causes, gastric and intestinal derangements are by far the most common. An overloaded stomach, excess in wine, beer, or highly-seasoned food, may occasion an attack, while certain articles of food, as fish, oysters, clams, crabs, lobsters, pork, especially sausage, oatmeal, mushrooms, raspberries, and strawberries, are all apt to bring out the eruption. Various drugs have the same effect (see *Dermatitis medicamentosa*) in some individuals. In most cases of urticaria from these causes a certain idiosyncrasy seems to exist. Any irritation of the bowel, as by worms in children, may bring out the eruption. Sudden emotion or mental excitement in certain persons may also produce it. In females menstrual and uterine difficulties may cause urticaria. The disease is intimately connected with the nervous system, and patients who suffer from chronic urticaria are apt to be persons of more or less depraved nervous organization.

The diagnosis of urticaria does not often present any difficulty, because the lesions are so peculiar in appearance, and because of the peculiar burning and tingling sensations. The small lesions, as found in children, may be mistaken for eczema, but a few scratches with the finger

nail on the skin of any part of the body will arouse urticarial red or white bands and streaks, which show an irritable condition of the skin and are very characteristic.

The treatment of urticaria depends greatly, for its success, upon the discovery and removal of the cause. When this is suspected to be some gastric disturbance, the precise articles of food of which the patient has been partaking should be inquired into; their quality, as to freshness, etc., should also be a matter of scrutiny. The possibility of the patient having eaten anything unusual should also be considered, as well as the previous ingestion of medicine. An emetic may be given in acute cases, if the contents of the stomach have been recently ingested and are suspected of being the cause. The bowels should be freely opened, if required, by a saline purgative. The diet should be of the most simple and unstimulating character, and the subsequent internal treatment should be directed against the digestive difficulty. The treatment in any given case must depend upon the result of a careful investigation into its nature and cause.

Among medicines, the laxative mineral waters are often advantageous: Hunyadi Janos, Ofener Racoczy, Friedrichshall, or Hathorn, the latter preferably drunk at the springs in Saratoga. The alkaline waters, as Vichy or Saratoga Vichy, or sulphur water, as the Richfield Springs water, with baths taken at the springs, may also at times be used with advantage. Diuretics are often of use. Quinia is a most useful remedy, whether malaria be present or not. Arsenic is sometimes of service when other remedies fail. Iron also is useful. The "Mistura ferri acida," already several times referred to, is a very useful remedy in many cases of urticaria.

Bromide of potassium, chloral, and other sedatives may be required to give rest and calm to the nervous system, often injured by long-continued suffering. The prepara-

tions of opium should generally be avoided. Among other remedies, to be tried in difficult cases, may be mentioned the following: Sulphate of atropia, in doses of $\frac{1}{120}$ to $\frac{1}{60}$ grain, morning and evening; sulphurous acid, in drachm doses, diluted with simple syrup; salicylic acid, in 20-grain doses, thrice daily, and chloride of ammonium, in 10- to 20-grain doses, thrice daily. All of these I have been obliged to use at one time or another, and I have used each with satisfaction.

External treatment is of importance to calm the burning and tingling pain of the eruption, which is at times almost unendurable. Alkaline baths, followed by soothing powders, such as are described under the treatment of acute eczema, will be of use. Sponging with vinegar and water, or alcohol, alone or diluted, often gives relief; it should be practiced frequently. Carbolic acid, three drachms, with an ounce of glycerine in a pint of water, is an excellent wash, though not so useful in the pruritus of urticaria as in that of other affections. Chloroform, a drachm to the ounce of alcohol, or a drachm to the ounce of cold cream, is very good. Dilute ammonia water is useful in some cases. Occasionally a saturated solution of benzoic acid in water is effectual. When one local remedy fails another should be tried. Irritating underclothing should be avoided, and the patient should sleep in a cool room, with light bed covering.

The prognosis in urticaria varies in each case. If the cause is a temporary gastric derangement, its removal will soon result in a cure. If, however, the urticaria is chronic and dependent upon some derangement of the nervous, digestive, or generative system of long standing, it is apt to prove very stubborn.

Vaccination, Skin Diseases Following.—In addition to the inoculation of syphilis by vaccination, an event of such rare occurrence as not to require description in the present

work, there are several skin affections which appear to arise as a result of a general irritation in predisposed constitutions which are worthy of note. These assume the following forms: 1. *Erythema vaccinia* (already described under *Erythema*). 2. A *herpetiform* eruption, which shows itself in the form of a number of closely-grouped vesicles, appearing on the third day after vaccination at the seat of the operation, surrounded by a red areola and itching severely. Sometimes eczema, with swelling of the axillary glands, results. It is apt to occur in weakly or anæmic children. 3. A *pemphigoid* eruption, when a bulla forms, instead of the usual vesicle, at the seat of inoculation. This may be followed by ulceration and cicatrization. It occasionally occurs as an epidemic. 4. A *furunculoid* eruption, in which red tubercles as large as peas appear at the seat of vaccination. These tubercles afterward suppurate. They correspond to ordinary follicular furuncles. 5. *Vaccinal erysipelas* sometimes makes its appearance, usually on the seventh to the tenth day after vaccination. It consists in the formation of a broad, red ring, which rapidly increases in extent. It is attended with swelling, tension, and pain, and presents the usual characters of erysipelas. It sometimes spreads down the forearm, or even as far as the fingers, or up the arm to the axilla and chest. It is, of course, accompanied by general febrile and other symptoms. 6. *Vaccinal ulcers* sometimes occur, in place of the ordinary evolution of the vaccine vesicle. These are due to the setting up of a very intense morbid process in the skin of the part, rather than to any particular idiosyncrasy of the person vaccinated, or to any specific change in the blood. 7. *Gangrene* has been known to occur in weakly children, the crusts being converted, on the twenty-fifth day after vaccination, into a black, fetid, gangrenous eschar. In one case reported, death ensued.

Vegetations.—(See *Verruca* and *Syphilis*, *skin diseases due to*.)

Venereal Wart.—(See *Verruca*.)

Vernix Caseosa.—(See *Seborrhœa*.)

Verruca (*Verrūca*, *Verrūse*, *u* pronounced as in pure), or wart, is essentially a papilloma. (See *Papilloma*.) It presents itself in several different forms. In addition to the common wart, as met with on the hands and elsewhere, there is a flat variety, usually about the size of the finger nail, and only slightly elevated above the level of the skin. This is apt to be met with on the face and on the backs of the hands, and, from being found most frequently in elderly people, is called *verruca senilis*, though these are largely sebaceous in character. *Acrochordon*, or filiform wart, is a single hair-like projection from the surface. Besides these forms of wart, there is the *verruca acuminata*, or pointed wart, consisting of one or more groups of acuminated or irregularly-shaped elevations, composed of greatly elongated papillæ of the skin, usually packed together so as to form a more or less solid mass of "vegetations." The individual prominences may be pointed, clubbed, or more or less sessile or pedunculated. In color, they are pinkish or reddish, bright red or purplish, depending on their situation and vascularity. They are apt to occur about the genitalia of both sexes. Upon the penis, they generally spring from the glans and inner surface of the prepuce. Upon the female, they generally spring from the inner surface of the labia and vagina. They are also found about the anus, mouth, axillæ, umbilicus, and toes. About the genitalia their surface is usually moist, and they exhale a disgusting odor, due to the decomposition of the secretions on their surface. They grow rapidly, and may attain large size and assume grotesque and misshapen forms.

Verruca is contagious and inoculable. The microbe

causing the growth is the bacterium porri of Cornil and Babes.*

The acuminated variety, as it occurs on the genitals, is often, but by no means always, venereal in origin, and may be due to the irritation of acrid discharges, as gonorrhœa. *It is never a manifestation of syphilis*, although a papillomatous condition may be superposed upon any syphilitic lesion, particularly where this is moist, and the vegetating syphiloderm must not be confounded with the growth under consideration. The wart is simply an hypertrophy of the papillæ induced by microbic infiltration and irritation in most cases, the connective tissue element being more prominent in the pointed variety, or condyloma. †

As the microbic element is at the bottom of the verrucous growth, antiseptic and parasiticide applications are likely to be of service.

The affected localities should be frequently washed with a bichloride of mercury soap, and when the warts are numerous and closely placed together, a solution of the bichloride (1-2000) may be applied from time to time to advantage. This treatment should precede the use of other remedies and accompany it.

Small warts may be clipped off with curved scissors, the base being touched with nitrate of silver stick. The dermal curette or scraping-spoon may also be employed. The ligature, *écraseur*, or galvano-caustic wire may be employed in the larger, vascular variety. Venereal warts about the labia are best treated by washing the parts with dilute liquor sodæ chlorinatæ, and afterward dusting the surface

* See Kühnman, Zur Bacteriologie der Verruca Vulgaris, *Monatshefte f. Prakt. Dermatologie*, 1889, No. 1. Also Darier, *Ann. de Derm et de Syph.*

† Verruca on the finger is to be distinguished from *tuberculosis verruca necrogenica* (or *dissection tubercle*), from chancre, which sometimes appears at the finger tip or under the nail as a wart, and from enchondroma.

with powdered calomel, resorcin, or a powder composed of equal parts of burnt alum and savin.

Perhaps the best treatment, however, consists in frequent bathing with bichloride of mercury solution (1-2000) and dusting the parts with a powder composed as follows:—

R. Pulv. sabinæ,
Pulv. acidi salicylici, āā ʒiv. M.

In some cases the application of a 10 or 20 per cent. salicylic acid rubber plaster will aid in the disappearance of the growths. Only the very largest require surgical treatment.*

Glacial acetic, nitric, chromic, or carbolic acids may be used. The larger condylomata may be attacked by a Paquelin's cautery. Common warts may be cauterized by one of the acids mentioned, or by means of caustic potash, in stick or solution. These more severe measures should not, however, be resorted to unless the milder applications fail. Tincture of the chloride of iron is sometimes used successfully. The following prescription answers excellently in many cases:—

R. Ext. cannabis indicæ, gr. x
Acid salicylici, ʒ ss
Collodii, ʒj. M.

Apply daily, for three or four days, and then scrape the wart, and, if necessary, apply again.

The salicylic rubber plaster of Johnson & Johnson is also an excellent application. It softens the wart, which can then be scraped off.

Other collodions which may be used are the following:—

R. Acidi salicylici, gr v-xxx
Alcoholis, f ʒ ss
Ætheris, f ʒ ij
Collodii flexili, ad f ʒiv. M.

Or this:—

R. Acidi salicylici,
Acidi lactic, āā ʒ ss
Colodii flexili, f ʒiv. M.

* See also Genry, *À propos de Vegetations Extra-Genitales*, Alger., 1893.

The following is an excellent, although very energetic, application. It should be employed with caution, care being taken that the effect does not extend too far:—

℞. Hydrarg. bichlor., gr. iv–viiij
Collodii flexili, fʒ iv. M.

Now and then warts resist all treatment, or spring up as fast as removed. In such cases arsenic may be given with some hope of preventing the recurrence of the growths. It should be administered in the form of Fowler's solution in the dose of two to four minims thrice daily. Magnesium sulphate in doses of from 10 to 20 grains morning and evening may also be employed. The tincture of thuja occidentalis in 20 to 30 drop doses three times a day may be employed. Occasionally the presence of warts seems due to some nervous or constitutional influence, and they stubbornly resist all treatment.

Verruca Necrogenica. (See *Dissection Tubercle*.)*

Vitiligo is an affliction of the skin characterized by the disappearance or transfer of pigment in the affected areas, and by an accumulation of pigment in the immediately surrounding portions of skin. It shows itself in the form of one or more usually sharply defined, rounded, ovalish or irregular-shaped, variously-sized and distributed, smooth, whitish spots, around the borders of which the surrounding skin shows an increase of pigment. The number of spots is usually not numerous, although larger areas or even the entire surface may be involved in rare cases; they are smooth and on a level with the surrounding skin, and save for the discoloration cannot be distinguished from it. The texture of the affected skin is, indeed, normal, except that the amount of pigment has diminished, a diminution which extends to the hairs growing on it, which usually turn

* For further details, see "Verruca plana juvenilis," *Ann. de Derm. et de Syph.*, Oct., 1888, 1889, p. 92; *ib.*, April or May (with picture).

white. The disease is popularly known as "piebald skin," and when occurring in the negro, has sometimes given rise to the notion that the skin was turning white, like that of a Caucasian. In many cases when vitiligo affects the scalp or other hairy parts, the hairs over the affected area turn white, and occasionally fall out. The disease is striking and disfiguring. Vitiligo sometimes disappears spontaneously after years, but treatment has little effect. The occurrence of vitiligo seems to depend in some way upon faulty innervation. Leloir has observed parenchymatous neuritis in the nerve fibrils distributed to the affected patches.

Clinically, vitiligo is often found in connection with nervous disorders, peripheral and central. It is said occasionally to be the precursor of tabes. Arsenic is the only remedy which, in my experience, has had a good effect, when used for months. Electricity, hydrotherapy, and all means of improving the general nutrition should be resorted to.

Feulard reports the cure in a young girl of vitiligo, accompanied with alopecia areata (between which and vitiligo there seems at times to be some connection), by applications of acetic acid, followed by tincture of cantharides and the occasional use of solutions of bichloride of mercury, say four grains to the ounce of alcohol and water.

The disease is sometimes mistaken for *Morphæa*, *Macular Leprosy*, and *Chloasma*. A reference to the description of these diseases will show wherein they differ.

Wart.—(See *Verruca*.)

Wen.—(See *Sebaceous Cyst*.)

Werlhof's Disease.—(See *Purpura*.)

Xanthelasma.—(See *Xanthoma*.)

Xanthoma is characterized by the formation of yellowish, pea-sized or larger, patches of various sizes, either flat with the skin or in tubercles and raised masses. The flat variety generally occurs on the eyelids, when the patches

look like bits of chamois skin inserted in the lid. The tubercular form occurs usually elsewhere than on the eyelids. Hyde has figured in the second edition of his textbook a very remarkable case where the tubercles occurred about the knees. The lesions of both varieties are usually single or few in number, but are now and then numerous. They rarely give rise to any sensation, but occasionally pain slightly. They used to be thought connected in some way with disease of the liver, but such connection has never been proved. The treatment is excision. Lately, Wende, of Buffalo, has succeeded in removing these tumors by electrolysis. (*See Electricity in Skin Disease.*)

Xeroderma.—(*See Ichthyosis.*)

Xeroderma pigmentosum.—(*See Angioma pigmentosum et atrophicum.*)

Yaws.—(*See Frambæsia.*)

Zoster Zona.—(*See Herpes zoster.*)

APPENDIX.

DIET IN DISEASES OF THE SKIN.

While there are many diseases of the skin which are purely local processes, or which are dependent upon general causes beyond the present ability of medical art to obviate, there are others, and among these some of the most important, as eczema, urticaria, acne, etc., in the management of which hygiene and dietetics play a most important part. Some allusion has been made to this point in treating of the various diseases in the foregoing pages, but it has seemed desirable to draw further attention to the subject in this place, and to give some general suggestions and hints, which may be developed to suit the individual case.

And first, with reference to the part of the physician in giving counsel on this matter. The time spent in interrogating the patient with reference to his hours of meals, habits of eating, favorite foods and drinks, the effects of different articles of diet upon his digestion, so far as he may have observed himself in this matter, etc., is by no means lost. Having formed an opinion as to the condition of the digestive organs, so far as stomachal digestion is concerned, the inquiry should be pushed further, and the intestinal digestion and habits of defecation should be examined into. In many cases the simple knowledge of the existence of constipation or diarrhœa, or of the regular performance of defecation, is all that is necessary, but in some instances it may be desirable to push the inquiry further.

Having come to a conclusion as to the points at fault, full and explicit directions as to diet and regimen are to be given the patient, as a great deal depends upon the care and thoroughness with which the physician's advice is followed. The exact diet, suitable to the individual, must be decided upon and enforced in such terms as to leave no doubt in the patient's mind as to the importance of every detail. Generalities in the way of directions, with a careless indication, in broad terms, of the articles of diet to be used and avoided, are not likely to produce a serious impression on the patient's mind, and the failure to amend is followed by a general despondency and distrust of all remedies.

It is obviously impossible, even if this were the place, to give a complete disquisition of diet in dyspepsia and weak digestion. Each case must be treated on its own merits. Inquiry should be made as to the particular articles of food which agree, so as to ascertain the form of dyspepsia which is present. I think it advisable, in many cases, to give the patient a list of such articles of diet as are commonly found upon our tables, marking such as are deemed suitable or unsuitable, and making such changes subsequently as the experience of the patient indicates. This list is arranged as follows:—

DIGESTIBLE FOODS.

Meats.—Sweetbread, plainly cooked. Chicken and turkey (white meat). Venison. Partridge. Pheasant. Pigeon (squab). Wild duck. Rabbit. Lamb, roast, stewed, or in broiled chops. Mutton, roast, or in broiled chops. Beef, roast, or in rare tenderloin steak. Eggs, soft boiled. Tripe. Oysters, raw, roast, broiled, or stewed (always rejecting the "eyes"). Fresh fish, especially trout, perch, and flounders. Meat broths and clear soups, carefully made, not rich, and without vegetables.

Vegetables.—Rice. Maccaroni. Spinach. Tomatoes (stewed). Peas (fresh and young). Beans (Lima, French,

and string, young and fresh). Squash. Carrots (young). Asparagus. Oyster plant, or Salsify (stewed). Mushrooms. Beets. Okras.

Bread, etc.—Dry and milk toast. Zwieback (toasted rusk). Steamed crackers. Wheat bread, rather stale, and preferably the crust. Rolls. Graham bread.

Beverages.—Cocoa, made from the nibs or shells. Weak tea, with a slice of lemon instead of sugar and cream. Coffee, with a raw, beaten egg, instead of milk, sweetened with sugar or extract of malt. Milk in small quantities at a time. Apollinaris water.

QUESTIONABLE FOODS,

such as are borne by some weak digestions, while disagreeing with others or at certain times :—

Meats. Reed birds. Duck. Black meat of chicken or turkey. Omelette. Scrambled eggs.

Vegetables. Potatoes, white. Parsnips. Stewed celery. Raw celery. Hominy. Egg plant. Water-cress. Onions. Foreign fruits, such as bananas, oranges, and grapes. (The usual summer fruits, when perfectly fresh and in season, agree with almost every one.)

Bread, etc. Fresh wheat bread. Graham bread and biscuit, when hot and fresh. Oatmeal mush or porridge. Indian mush. Cracked wheat.

Puddings (boiled and baked), as custard, bread, farina, corn starch, tapioca, etc. Stewed fruits. Curds and cream. Plain cakes, as rusk, bun, etc. Ice cream.

Fluids. Coffee and tea, strong, with sugar and cream. Chocolate as usually prepared. Lemonade. Ginger ale, and the like.

INDIGESTIBLE FOODS,

such as are commonly found to disagree with persons of weak digestion, or suffering from the various forms of dyspepsia :—

Meats. Ham. Pork in any shape. Sausage. Corned beef. Dried beef. Veal. Goose. Kidneys. Liver.

Salt fish or smoked fish, as cod, mackerel, salmon, or herring.

Shell fish, as lobsters, crabs, clams, and the "eyes" of oysters.

Hard-boiled eggs.

Vegetables. Cabbage. Sauer-kraut. Cauliflower. Lettuce and salads of all sorts. Cucumbers. Pickles. Corn. Raw celery. White potatoes (new). Sweet potatoes. Dried fruits, as raisins, figs, etc. Nuts. Water ices. Preserves.

Bread, etc. Hot bread, and especially hot griddle and other breakfast cakes. Fritters. Dumplings. Puddings of boiled flour. Pastry of all sorts and rich cakes. Cheese.

Fluids. Alcoholic and malt liquors of all kinds generally disagree with dyspeptics, and should not be taken except as prescribed. Syrups and gaseous beverages are also unwholesome.

In a general way salted and dried foods are to be avoided. Also too much fat; but butter, which is one of the most digestible fats, and which with most people adds a zest to restricted diet, should in almost all cases be permitted. Pickles, preserves, and candied or dried fruits should be prohibited. Patients should be instructed (for this advice is often required) to eat slowly, chew carefully, and not to deluge the stomach with water or other fluids during meal time, especially at the beginning.

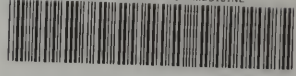
In cases of actual dyspepsia, considerable comfort is often gained by dividing the animal from the vegetable food, taking one at one meal, and the other at another. Vegetable food is much less likely to cause flatulence if taken alone.



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